Magnitude and Frequency of Floods in the United States

Part 9. Colorado River Basin

By JAMES L. PATTERSON and WILLIAM P. SOMERS

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CONTENTS

	1
Abstract	
[ntroduction	
Purpose and scope	
Acknowledgments	
Application of the method	
Regional application	
Illustrative problem	
Special application	
Illustrative problem	
Description of the report area	
River basins	
Topography	
Climate	
Flood-frequency analysis	
Method of analysis	
Records used	
Flood frequency at a gaging station	
Types of flood series	
Flood-frequency curves	
Regional flood frequency	
Mean annual flood	
Composite frequency curves	
Summary	
Flood records at gaging stations and miscellaneous sites.	
Maximum known floods	
Colorado River main stem	
Colorado River below Baker Gulch, near Grand Lake, Colo	
Colorado River near Grand Lake, Colo	
Little Columbine Creek basin	
Little Columbine Creek above Shadow Mountain Reservoir, at	
Grand Lake, Colo	
Grand Lake Outlet basin	
North Inlet at Grand Lake, Colo	
East Inlet near Grand Lake, Colo	
Grand Lake Outlet at Grand Lake, Colo	
Colorado River main stem	
Colorado River below Shadow Mountain Reservoir, Colo	
Columbine Creek basin	
Columbine Creek bashing Columbine Creek above Lake Granby, near Grand Lake, Colc.	
Arapaho Creek basin	
Arapaho Creek at Monarch Lake Outlet, Colo	
Arapano Creek at Monarch Lake Outlet, ColoArapano Creek below Monarch Lake, Colo	
Colorado Pivor main atom	
Colorado River main stem	
Colorado River near Granby, Colo	

IV CONTENTS

Flood red	cords at gaging stations and miscellaneous sites—Continued Pa
Wille	ow Creek basin
	Willow Creek near Granby, Colo
	Willow Creek above Willow Creek Reservoir, Colo
	er River basin
	Fraser River near Winter Park, Colo
	Vasquez Creek near Winter Park, Colo
	St. Louis Creek near Fraser, Colo
	Ranch Creek above forks, near Fraser, Colo
	North Fork Ranch Creek near Fraser, Colo
	Middle Fork Ranch Creek near Fraser, Colo
	South Fork Ranch Creek near Winter Park, Colo
	Ranch Creek near Fraser, Colo
	Ranch Creek near Tabernash, Colo
	Meadow Creek near Tabernash, Colo
	Strawberry Creek near Granby, Colo
	Fraser River at Granby, Colo
	rado River main stem
	Colorado River at Hot Sulphur Springs, Colo
	iams Fork basin
VV 111	
	Williams Fork below Steelman Creek, Colo
	Williams Fork near Leal, Colo
	Keyser Creek near Leal, Colo
	Williams Fork near Scholl, Colo
<i>m</i>	Williams Fork near Parshall, Colo
Trou	iblesome Creek basin
	Troublesome Creek near Pearmont, Colo
	Troublesome Creek at Atmore Ranch, near Troublesome, Colo
	East Fork Troublesome Creek near Troublesome, Colo
3.6	Troublesome Creek near Troublesome, Colo
Muc	ldy Creek basin
	Muddy Creek near Kremmling, Colo
	Antelope Creek near Kremmling, Colo
	Pass Creek near Kremmling, Colo
Blue	River basin
	Blue River at Dillon, Colo
	Snake River near Montezuma, Colo
	Keystone Gulch near Dillon, Colo
	Snake River at Dillon, Colo
	Tenmile Creek at Frisco, Colo
	Tenmile Creek below North Fork, at Frisco, Colo
	Tenmile Creek at Dillon, Colo
	Straight Creek near Dillon, Colo
	Willow Creek near Dillon, Colo
	Rock Creek near Dillon, Colo
	Boulder Creek near Dillon, Colo
	Slate Creek near Dillon, Colo
	Blue River above Green Mountain Reservoir, Colo
	Black Creek below Black Lake, near Dillon, Colo
	Black Creek above Green Mountain Reservoir, Colo
	Otter Creek above Green Mountain Reservoir, Colo
	Cataract Creek above Green Mountain Reservoir, Colo
	Blue River near Kremmling, Colo
	Blue River below Green Mountain Reservoir, Colo

CONTENTS V

Flood r	ecords at gaging stations and miscellaneous sites—Continued
	orado River main stem
	Colorado River near Kremmling, Colo
Pin	ey River basin
	Piney River below Piney Lake, near Minturn, Colo
	Piney River near State Bridge, Colo
Roc	ck Creek basin
200	Rock Creek near Toponas, Colo
Bio	Alkali Creek basin
~	Catamount Creek near Burns, Colo
Cal	bin Creek basin
	Sunnyside Creek near Burns, Colo
Eag	gle River basin
	Eagle River at Red Cliff, Colo
	Turkey Creek at Red Cliff, Colo
	Homestake Creek at Gold Park, Colo
	Homestake Creek near Red Cliff, Colo
	Cross Creek near Minturn, Colo
	Gore Creek at upper station, near Minturn, Colo
	Black Gore Creek near Minturn, Colo
	Gore Creek near Minturn, Colo
	Eagle River at Eagle, Colo
	Brush Creek near Eagle, Colo
	Eagle River at Gypsum, Colo
	Gypsum Creek near Gypsum, Colo
	Eagle River below Gypsum, Colo
Co	lorado River main stem
CO.	Colorado River near Dotsero, Colo
	Colorado River at Glenwood Springs, Colo
D ₀	
no	aring Fork basin
	Roaring Fork at Aspen, Colo
	Hunter Creek near Aspen, Colo
	Castle Creek near Aspen, Colo
	Fryingpan River at Norrie, Colo
	North Fork Fryingpan River near Norrie, Colo
	Lime Creek at Troutville, Colo
	Lime Creek at Thomasville, Colo
	Fryingpan River at Thomasville, Colo
	Crystal River at Marble, Colo
	Crystal River above Avalanche Creek, near Redstone, Colo
	Crystal River near Redstone, Colo
	Thompson Creek near Carbondale, Colo
	Cattle Creek near Carbondale, Colo
	Fourmile Creek near Carbondale, Colo
~	Roaring Fork at Glenwood Springs, Colo-
Ca	nyon Creek basin
_	Canyon Creek near New Castle, Colo
Ell	Creek basin
	Elk Creek at New Castle, Colo
Ga	rfield Creek basin
	Baldy Creek near New Castle, Colo
Di	vide Creek basin
	West Divide Creek below Willow Creek near Rayen Colo

VI CONTENTS

Flood records at gaging stations and miscellaneous sites—Continued
Rifle Creek basin
East Rifle Creek near Rifle, Colo
Rifle Creek near Rifle, Colo
Beaver Creek basin
Beaver Creek near Rifle, Colo
Battlement Creek basin
Battlement Creek near Grand Valley, Colo
Parachute Creek basin
Parachute Creek near Grand Valley, Colo
Parachute Creek at Grand Valley, Colo
Roan Creek basin
Roan Creek near De Beque, Colo
Colorado River main stem
Colorado River near Cameo, Colo
Plateau Creek basin
Plateau Creek at upper station, near Collbran, Colo
Plateau Creek near Collbran, Colo
Buzzard Creek below Owens Creek, near Heiberger, Colo
Buzzard Creek near Heiberger, Colo
Buzzard Creek near Collbran, Colo
Brush Creek near Collbran, Colo
Big Creek at upper station, near Collbran, Colo
Big Creek near Collbran, Colo
Cottonwood Creek at upper station, near Molina, Colo
Cottonwood Creek at upper station, near Molma, Colo
Bull Creek at upper station, near Molina, Colo
,,,,,,,,,,
Coon Creek near Mesa, Colo
Plateau Creek near Cameo, Colo
Taylor River at Taylor Park, Colo Taylor River below Taylor Park Reservoir, Colo
Taylor River at Almont, Colo
East River near Crested Butte, Colo
Coal Creek near Crested Butte, Colo
Slate River near Crested Butte, Colo
Cement Creek near Crested Butte, Colo
East River at Almont, Colo
Castle Creek near Baldwin, Colo
Ohio Creek near Baldwin, Colo
Ohio Creek near Gunnison, Colo
Gunnison River near Gunnison, Colo
Tomichi Creek at Sargents, Colo
Tomichi Creek near Doyleville, Colo
Tomichi Creek at Parlin, Colo
Quartz Creek near Ohio City, Colo
Cochetopa Creek near Parlin, Colo
Tomichi Creek at Gunnison, Colo

CONTENTS VII

Flood records at gaging stations and miscellaneous sites—Continued	
Gunnison River basin—Continued	Page
Gunnison River at Iola, Colo	140
Cebolla Creek near Lake City, Colo	140
Cebolla Creek at Powderhorn, Colo	141
Soap Creek near Sapinero, Colo	141
Sapinero Creek at Sapinero, Colo	142
Lake Fork at Lake City, Colo	143
Henson Creek at Lake City, Colo	143
Lake Fork at Gateview, Colo	144
Curecanti Creek near Sapinero, Colo	144
Cimarron Creek near Cimarron, Colo	145
Cimarron Creek below Squaw Creek, at Cimarron, Colo	146
Crystal Creek near Maher, Colo	146
Gunnison River below Gunnison tunnel, Colo-	147
Smith Fork near Crawford, Colo	148
Smith Fork at Crawford, Colo	148
Iron Creek near Crawford, Colo	149
East Muddy Creek near Bardine, Colo	149
West Muddy Creek near Ragged Mountain, Colo	150
Muddy Creek at Bardine, Colo	150
Anthracite Creek near Floresta, Colo	151
North Fork Gunnison River near Somerset, Colo	151
North Fork Gunnison River near Paonia, Colo	152
Minnesota Creek near Paonia, Colo	153
Leroux Creek near Cedaredge, Colo	153
Leroux Creek near Lazear, Colo	154
Leroux Creek near Hotchkiss, Colo	155
Currant Creek near Cedaredge, Colo	155
Tongue Creek near Cedaredge, Colo	155
Ward Creek near Cedaredge, Colo	156
Kiser Creek near Cedaredge, Colo	156
Cottonwood Creek near Cedaredge, Colo	157
Youngs Creek near Cedaredge, Colo	157
Ward Creek below Kiser Creek, near Cedaredge, Colo	157
Surface Creek near Cedaredge, Colo	158
Surface Creek at Cedaredge, Colo	158
Surface Creek at Eckert, Colo	159
Red Mountain Creek near Ironton, Colo	160
Uncompangre River at Ouray, Colo	160
Canyon Creek at Ouray, Colo	161
Uncompangre River below Ouray, Colo	161
West Fork Dallas Creek near Ridgway, Colo	162
East Fork Dallas Creek near Ridgway, Colo	162
Pleasant Valley Creek near Noel, Colo	163
Dallas Creek near Ridgway, Colo	163
Cow Creek near Ridgway, Colo	164
Uncompangre River at Colona, Colo	164
Uncompangre River at Fort Crawford, Colo	165
Uncompangre River at Montrose, Colo	165
Uncompangre River at Delta, Colo	166
Roubideau Creek at mouth, near Delta, Colo	166
Kahnah Creek near Whitewater, Colo	167
Gunnison River near Grand Junction, Colo	168

VIII CONTENTS

Flood re	cords at gaging stations and miscellaneous sites—Continued P
Cole	orado River main stem
	Colorado River near Fruita, Colo
	Colorado River near Colorado-Utah State line
Dol	ores River basin
	Dolores River below Rico, Colo
	Dolores River at Dolores, Colo
	Lost Canyon Creek at Dolores, Colo
	Dolores River near McPhee, Colo
	Disappointment Creek near Dove Creek, Colo
	Twomile Creek near La Sal, Utah
	Dolores River at Bedrock, Colo
	Buckeye Reservoir Outlet near Paradox, Colo
	West Paradox Creek near Paradox, Colo
	West Paradox Creek near Bedrock, Colo
	San Miguel River at Fall Creek, Colo
	Fall Creek near Fall Creek, Colo
	Leopard Creek at Noel, Colo
	San Miguel River near Placerville, Colo
	Beaver Creek near Norwood, Colo
	Horsefly Creek near Sams, Colo
	San Miguel River near Nucla, Colo
	Cottonwood Creek near Nucla, Colo
	Naturita Creek near Norwood, Colo
	San Miguel River at Naturita, Colo
	Tabeguache Creek near Nucla, Colo
	San Miguel River at Uravan, Colo
	Taylor Creek near Gateway, Colo
	Deep Creek near Paradox, Colo
	Roc Creek near Uranium, Colo
	Dolores River at Gateway, Colo
	Dolores River near Cisco, Utah.
Col	orado River main stem
Con	Colorado River near Cisco, Utah
ጥ።	outaries between Dolores River and Green River
111	Onion Creek near Moab, Utah
	Castle Creek above diversions, near Moab, Utah
	Courthouse Wash near Moab, Utah
	Mill Creek near Moab, UtahPack Creek at M4 Ranch, near Moab, Utah
	Pack Creek near Moab, Utah
	Hatch Wash near La Sal, Utah
	Indian Creek near Monticello, Utah
	Indian Creek above Cottonwood Creek, near Monticello, Utah.
	Cottonwood Creek near Monticello, Utah
	Indian Creek above Harts Draw, near Monticello, Utah
Gre	en River basin
	Green River at Warren Bridge, near Daniel, Wyo
	Beaver Creek near Daniel, Wyo
	Horse Creek at Sherman ranger station, Wyo
	Horse Creek near Daniel, Wyo
	Horse Creek at Daniel Wyo

CONTENTS

Flood records at gaging stations and miscellaneous sites—Continued	
	age
Green River near Daniel, Wyo1	96
Cottonwood Creek near Daniel, Wyo	97
Pine Creek above Fremont Lake, Wyo1	.97
Pine Creek at Fremont Lake Outlet, Wyo1	.98
	.98
	99
, ,	99
, ,	000
,,,,,,, .	900
	201
	201
East Fork at East Fork Canal, Wyo	202
	203
East Fork at Newfork, Wyo	203
	204
	204
Middle Piney Creek below South Fork, near Big Piney, Wyo	205
Middle Piney Creek near Big Piney, Wyo	206
La Barge Creek near La Barge Meadows ranger station, Wyo	206
La Barge Creek near Viola, Wyo	207
La Barge Creek near La Barge, Wyo	207
Green River near Fontenelle, Wyo	208
, , , ,	208
Fontenelle Creek near Fontenelle, Wyo	209
8	209
Big Sandy Creek near Farson, Wyo	210
Little Sandy Creek near Elkhorn, Wyo	211
	211
- access of the second of the	212
Dig Sundy Groom Solo (Lidea, 11) Grant Line Line Line Line Line Line Line Line	212
, j	213
0.10011 10.101 1.0011 0.10011 1.1011	213
= 100 = 0 = 1 0 = 1 1 1 1 1 1 1 1 1 1 1	214
	215
— was	215
,, and - and	216
······································	217
—	217
The state of the s	218
Hams Fork near Frontier, Wyo	218
	219
	219
	220
Tom ye I of a fieur Bollowice, 11 your relationship	220
	221
Hober tori Bouter Creek Rour Bonevice, Hydriania	222
Henrys Fork near Burntfork, Wyo	222
Burnt Fork near Burntfork, Wyo	223
zano i om at zamioni, ii jozzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz	223
Henrys Fork at Linwood, Utah	224
Green River at Flaming Gorge, near Linwood, Utah	225

Flood records at gaging stations and miscellaneous sites—Continued
Green River basin—Continued
Sheep Creek near Manila, Utah
Carter Creek near Manila, Utah
Carter Creek at mouth, near Manila, Utah
Green River near Greendale, Utah
Yampa River near Oak Creek, Colo
Oak Creek near Oak Creek, Colo
Yampa River at Steamboat Springs, Colo
Elk River at Hinman Park, Colo
Elk River at Clark, Colo
Elk River near Trull, Colo
Trout Creek near Phippsburg, Colo
Fish Creek near Milner, Colo
Elkhead Creek near Elkhead, Colo
Fortification Creek at Craig, Colo
East Fork of Williams Fork above Willow Creek, Colo
East Fork of Williams Fork near Pagoda, Colo
Williams Fork at Hamilton, Colo
Milk Creek near Thornburg, Colo
Yampa River near Maybell, Colo
Middle Fork Little Snake River near Battle Creek, Colo
North Fork Little Snake River near Encampment, Wyo
North Fork Little Snake River near Slater, Colo
South Fork Little Snake River near Battle Creek, Colo
Little Snake River near Slater, Colo
Battle Creek near Encampment, Wyo
Battle Creek near Slater, Colo
Slater Fork at Baxter Ranch, near Slater, Colo
Slater Fork near Slater, Colo
Savery Creek at upper station, near Savery, Wyo
Savery Creek near Savery, Wyo
Little Snake River near Dixon, Wyo
Willow Creek near Baggs, Wyo
Willow Creek near Dixon, Wyo
Fourmile Creek near Baggs, Wyo
Little Snake River near Lily, Colo
Jones Hole Creek near Jensen, Utah
Green River near Jensen, Utah
Brush Creek near Vernal, Utah
Little Brush Creek near Vernal, Utah
Brush Creek near Jensen, Utah
Ashley Creek below Trout Creek, near Vernal, Utah
South Fork Ashley Creek near Vernal, Utah
Ashley Creek near Vernal, Utah
Dry Fork above sinks, near Dry Fork, Utah
North Fork of Dry Fork near Dry Fork, Utah
East Fork of Dry Fork near Dry Fork, Utah
Dry Fork below springs, near Dry Fork, Utah
Dry Fork at mouth, near Dry Fork, Utah
Ashley Creek at Sign of the Maine, near Vernal, Utah
Ashley Creek near Jensen, Utah
Duchesne River at Provo River Trail, near Hanna, Utah

CONTENTS XI

	ords at gaging stations and miscellaneous sites—Continued
	n River basin—Continued
	Hades Creek near Hanna, Utah
	Duchesne River near Hanna, Utah
,	West Fork Duchesne River below Dry Hollow, near Hanna, Utal .
•	West Fork Duchesne River near Hanna, Utah
	Wolf Creek above Rhodes Canyon, near Hanna, Utah
	Duchesne River at Hanna, Utah
	Duchesne River near Tabiona, Utah
	South Fork Rock Creek near Hanna, Utah
	Rock Creek near Hanna, Utah
	Rock Creek near Mountain Home, Utah
	Duchesne River at Duchesne, Utah
1	Strawberry River near Soldier Springs, Utah
	Currant Creek below Red Ledge Hollow, near Fruitland, Utah
	Water Hollow near Fruitland, Utah
	Currant Creek near Fruitland, Utah
	Strawberry River at Duchesne, Utah
	Lake Fork above Moon Lake, near Mountain Home, Utah
	Yellowstone Creek below Swift Creek, near Altonah, Utah
	Yellowstone Creek near Altonah, Utah
	Duchesne River at Myton, Utah
	Uinta River above Clover Creek, near Neola, Utah
	Clover Creek near Neola, Utah
	Uinta River near Neola, Utah
	Farm Creek near Whiterocks, Utah
	Whiterocks River above Paradise Creek, near Whiterocks, Utal
	Whiterocks River near Whiterocks, Utah
	Dry Gulch near Neola, Utah
	Duchesne River near Randlett, Utah
	White River below Trapper's Lake, Colo
	White River near Buford, Colo
	White River at Buford, Colo
	South Fork White River near Buford, Colo
	South Fork White River at Buford, Colo
	Big Beaver Creek near Buford, Colo
	Coal Creek near Meeker, Colo
	White River near Meeker, Colo
	Piceance Creek at Rio Blanco, Colo
	White River near Watson, Utah
	Green River near Ouray, Utah
	Willow Creek above diversions, near Ouray, Utah
	Willow Creek near Ouray, Utah
	Minnie Maud Creek near Myton, Utah
	Minnie Maud Creek at Nutter Ranch, near Myton, Utah
	Gooseberry Creek near Scofield, Utah
	Price River above Scofield Reservoir, near Scofield, Utah
	North Fork White River near Soldier Summit, Utah
	White River near Soldier Summit, Utah
	Price River near Heiner, Utah
	Price River near Helper, Utah
	Price River at Woodside, Utah
	Green River at Green River, Utah

XII CONTENTS

Flood records a	t gaging stations and miscellaneous sites—Continued
Green Rive	er basin—Continued
Salerat	tus Wash at Green River, Utah
	s Wash near Green River, Utah
Huntin	ngton Creek near Huntington, Utah
	ngton Creek near Castle Dale, Utah
Cottor	nwood Creek near Orangeville, Utah
	nwood Creek near Castle Dale, Utah
Ferron	Creek (upper station) near Ferron, Utah
	Creek near Castle Dale, Utah
	afael River near Castle Dale, Utah
San Ra	afael River near Green River, Utah
	l River basin
	y Creek near Emery, Utah
	reek above diversions, near Emery, Utah
	y Creek below Ivie Creek, near Emery, Utah
	Devil River near Hite, Utah
	h basin
	Wash near Hite, Utah
	yon basin
	Canyon near Hite, Utah
	Liver main stem
Colora	do River at Hite, Utah
	River basin
	Creek near Escalante, Utah
	reek near Escalante, Utah
	nte River near Escalante, Utah
	ork Boulder Creek near Boulder, Utah
	ork Deer Creek near Boulder, Utah
	er Creek near Boulder, Utah
	nte River at mouth, near Escalante, Utah
	River basin
	Fork San Juan River above Sand Creek, near Pagosa
	ngs, Colo
	ork San Juan River near Pagosa Springs, Colo
	Fork San Juan River above Borns Lake, near Pagosa
	ngs, Colo
	Fork San Juan River near Pagosa Springs, Colo
	7 Creek near Pagosa Springs, Colo
	an River at Pagosa Springs, Colo
	8 - F 8,
	, ,
Marrat	Navajo River at Chromo, Colo
navajo Dia J	River at Edith, Colo
Willian	River at Bridge ranger station, near Pagosa Springs, Colons Creek near Bridge ranger station, near Pagosa Springs,
\mathbf{W} emin	auche Creek near Bridge ranger station, near Pagosa
Sprir	ngs, Colo
	River near Piedra, Colo
San Ju	an River at Rosa N Mex

CONTENTS XIII

od re	cords at gaging stations and miscellaneous sites—Continued
San	Juan River basin—Continued
	Vaqueros Canyon near Gobernador, N. Mex
	Los Pinos River below Snowslide Canyon, near Weminuche Pass,
	Colo
	Los Pinos River near Bayfield, Colo
	Los Pinos River at Ignacio, Colo
	Spring Creek at La Boca, Colo
	San Juan River near Archuleta, N. Mex
	San Juan River near Blanco, N. Mex.
	Valdez Draw near Bloomfield, N. Mex
	San Juan River at Bloomfield, N. Mex
	Gallegos Canyon tributary near Nageezi, N. Mex
	Animas River at Howardsville, Colo
	Cement Creek near Silverton, Colo
	Mineral Creek near Silverton, Colo
	Lime Creek near Silverton, Colo
	Aminas River above Tacoma, Colo
	Hermosa Creek near Hermosa, Colo
	Animas River at Durango, Colo
	Lightner Creek near Durango, Colo
	Florida River near Hermosa, Colo
	Florida River near Durango, Colo
	Florida River at Bondad, Colo
	Animas River near Cedar Hill, N. Mex
	Animas River at Farmington, N. Mex.
	San Juan River at Farmington, N. Mex
	La Plata River at Hesperus, Colo
	Cherry Creek near Red Mesa, Colo.
	La Plata River at Colorado-New Mexico State line
	La Plata River at La Plata, N. Mex.
	Chusca Wash near Mexican Springs, N. Mex
	Catron Wash near Mexican Springs, N. Mex.
	San Juan River at Shiprock, N. Mex.
	West Mancos River near Mancos, Colo
	East Mancos River near Mancos, Colo
	Middle Mancos River near Mancos, Colo
	Mancos River near Mancos, Colo
	Mancos River near Towaoc, Colo
	McElmo Creek near Cortez, Colo
	McElmo Creek near Colorado-Utah State line
0.1	San Juan River near Bluff, Utah
C01	orado River main stem
D	Colorado River at Lees Ferry, Ariz
rar	ria River basin
	Paria River near Cannonville, Utah
T 11	Paria River at Lees Ferry, Ariz
Lit	tle Colorado River basin
	Little Colorado River above Lyman Reservoir, near St. Johns,
	Ariz
	Little Colorado River above Zuni River, near Hunt, Ariz
	Zuni River at mouth, near Hunt, Ariz
	LITTIO LOLOPO CO RIVOT DOST HIDT AND

XIV CONTENTS

	ords at gaging stations and miscellaneous sites—Contirued
Little	e Colorado River basin—Continued
5	Show Low Creek at Show Low, Ariz
S	Silver Creek near Snowflake, Ariz
I	Little Colorado River at Woodruff, Ariz
J	Puerco River tributary near Fort Wingate, N. Mex.
J	Puerco River at Gallup, N. Mex.
J	Puerco River tributary near Gamerco, N. Mex.
J	Puerco River near Adamana, Ariz
	Little Colorado River at Holbrook, Ariz
(Chevelon Fork below Wildcat Canyon, near Winslow, Ariz
(Chevelon Fork near Winslow, Ariz
	Clear Creek below Willow Creek, near Winslow, Ariz
(Clear Creek near Winslow, Ariz
J	Little Colorado River at Grand Falls, Ariz
	Moenkopi Wash near Tuba, Ariz
	Moenkopi Wash near Cameron, Ariz
	Little Colorado River near Cameron, Ariz
	ado River main stem
	Colorado River near Grand Canyon, Ariz
	at Angel Creek basin
-	Bright Angel Creek near Grand Canyon, Ariz
	n River basin
_	North Fork Virgin River near Springdale, Utah
	Virgin River at Virgin, Utah
	Ash Creek near New Harmony, Utah
	Santa Clara River near Central, Utah
	Moody Wash near Veyo, Utah
	Santa Clara River above Winsor Dam, near Santa Clara, Utah.
	Santa Clara River at St. George, Utah
	Virgin River near St. George, Utah
	Virgin River at Littlefield, Ariz
	Muddy River near Moapa, Nev.
	Meadow Valley Wash near Panaca, Nev
	Meadow Valley Wash near Caliente, Nev
	Muddy River near Glendale, Nev.
	Muddy River near Overton, Nev
	Vegas Wash basin
	Las Vegas Wash near Henderson, Nev
	ado River main stem
	Colorado River near Topock, Ariz
	Williams River basin
	Date Creek near Congress, Ariz
	Santa Maria River near Alamo, Ariz
	Bill Williams River near Alamo, Ariz
	Bill Williams River at Planet, Ariz
	River basin
	Gila River near Gila, N. Mex
	Gila River near Cliff, N. Mex
(Gila River near Red Rock, N. Mex
(

CONTENTS XV

cords at gaging stations and miscellaneous sites—Continued
River basin—Continued
Gila River near Clifton, ArizTrout Creek near New Mexico-Arizona State line, near Luna,
N. Mex
Trout Creek near Luna, N. Mex
Tularosa River near Aragon, N. Mex
Tularosa River near Reserve, N. Mex
San Francisco River near Glenwood, N. Mex
San Francisco River at Clifton, Ariz
Willow Creek near Point of Pines, near Morenci, Ariz
Willow Creek near Double Circle Ranch, near Morenci, Ariz
Eagle Creek near Double Circle Ranch, near Morenci, Ariz
Eagle Creek above pumping plant, near Morenci, Ariz
Gila River at head of Safford Valley, near Solomon, Ariz
Agricultural Research Service Safford watershed W-I, Arizona.
Cave Creek near Paradise, Ariz
San Simon River near San Simon, Ariz
Agricultural Research Service Safford watershed W-V, Arizona-
Agricultural Research Service Safford watershed W-IV, Arizona
San Simon River near Solomon, Ariz
Gila River at Safford, Ariz
Agricultural Research Service Tombstone watershed W-V, Arizona
Agricultural Research Service Tombstone watershed W-III, Arizona
Agricultural Research Service Tombstone watershed W-IV, Arizona
Agricultural Research Service Safford watershed W-II, Arizona
Gila River at Calva, Ariz
San Carlos River near Peridot, Ariz
Gila River below Coolidge Dam, Ariz
Gila River at Winkelman, Ariz
San Pedro River at Palominas, Ariz
San Pedro River at Charleston, Ariz
Agricultural Research Service Tombstone watershed W-II,
Arizona Arizona
Agricultural Research Service Tombstone watershed W-I, Arizona
San Pedro River near Redington, Ariz
San Pedro River near Mammoth, Ariz
Aravaipa Creek near Feldman, Ariz
Gila River at Kelvin, Ariz
Queen Creek at Whitlow damsite, near Superior, Ariz
Gila River near Laveen, Ariz.
Santa Cruz River near Lochiel, Ariz
Santa Cruz River near Nogales, Ariz
Sonoita Creek near Patagonia, Ariz
Santa Cruz River at Continental, Ariz
Santa Cruz River at Tucson, Ariz
Tucson Arroyo at Vine Ave., Tucson, Ariz
Sabino Creek near Mount Lemmon, Ariz
Sabino Creek near Tucson, Ariz
Davino Oteck hear rucsom, Ariz

XVI CONTENTS

Flood records at gaging stations and miscellaneous sites—Continued
Gila River basinContinued Pa
Rillito Creek near Wrightstown, Ariz4
Rincon Creek near Tucson, Ariz 4
Rillito Creek near Tucson, Ariz4
Santa Cruz River at Cortaro, Ariz
Santa Rosa Wash near Vaiva Vo, near Sells, Ariz4
Santa Cruz River near Laveen, Ariz4
Pachete Creek at Maverick, Ariz4
Black River below pumping plant, near Point of Pines Ariz 4
Big Bonita Creek near Fort Apache, Ariz
Turkey Creek near Fort Apache, Ariz
Black River near Fort Apache, Ariz4
White River near McNary, Ariz4
East Fork White River near Fort Apache, Ariz4
Rock Creek near Fort Apache, Ariz
North Fork White River near Fort Apache, Ariz4
Carrizo Creek above Corduroy Creek, near Show Low, Ariz 4
Corduroy Creek above Forestdale Creek, near Show Low, Ariz 4
Forestdale Creek near Show Low, Ariz4
Corduroy Creek near mouth, near Show Low, Ariz
Carrizo Creek near Show Low, Ariz4
Salt River near Chrysotile, Ariz4
Salt River near Roosevelt, Ariz
Tonto Creek above Gun Creek, near Roosevelt, Ariz4
Granite Creek near Prescott, Ariz4
, ·
Rattlesnake Canyon near Rimrock, Ariz 4 Verde River near Camp Verde. Ariz 4
· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·
Verde River below Tangle Creek, above Horseshoe Dam, Ariz 4
Agua Fria River near Mayer, Ariz
Hassayampa River near Wagoner, Ariz
Hassayampa River at Box damsite, near Wickenburg, Ariz 4
Hassayampa River near Morristown, Ariz
Gila River below Gillespie Dam, Ariz4
Gila River near Dome, Ariz
Colorado River main stem
Colorado River at Yuma, Ariz4
Whitewater Draw basin4
Whitewater Draw near Douglas, Ariz
Selected references. 4
Index4

ILLUSTRATIONS

Map of Colorado River basin showing gaging stations, hydro-	
	Page
	2
	4
1 0	
area and mean altitude:	
3. Hydrologic area 1	4
4. Hydrologic area 2	5
5. Hydrologic area 3	5
6. Hydrologic area 4	6
7. Hydrologic area 5	6
8. Hydrologic area 6	7
9. Hydrologic area 7	8
10. Hydrologic area 8	9
11. Hydrologic area 9	9
•	10
	10
	11
	11
	12
	12
	16
	10
	16
	17
	17
	18
	10
	19
	19
	20
	20
	25
near Chron, Ariz	20
	
TABLES	
a new weddig	
	Page
Maximum floods at gaging stations	30
Peak discharge at miscellaneous sites and outstanding floods at	30
	52
	~ -
	logic areas, and flood-frequency regions

MAGNITUDE AND FREQUENCY OF FLOODS IN THE UNITED STATES

PART 9. COLORADO RIVER BASIN

By James L. Patterson and William P. Somers

ABSTRACT

This report outlines methods by which the magnitude and frequency of expected floods of any recurrence interval from 1.1 to 50 years can be determined at most points in the Colorado River basin.

Composite frequency curves were drawn showing the relation of the mean annual flood to floods having recurrence intervals from 1.1 to 50 years. Other curves express the relation of the mean annual flood to basin characteristics. In the northern part of the basin (north of about lat 37° N.) both drainage area and mean altitude were important factors influencing the magnitude of the mean annual flood. Only drainage area was used as an independent variable in the southern part of the basin.

By combining data from the composite frequency curves and curves showing the relation of the mean annual flood to basin characteristics, flood-frequency curves can be drawn for streams in the report area not materially affected by regulation or diversion within the range and recurrence interval defined by base data.

Some of the larger streams in the basin do not lend themselves to regional analysis. These streams are given special treatment in this report. Owing to the paucity of streamflow data, flood-frequency relations are not defined in some of the more arid parts of the report area.

INTRODUCTION

PURPOSE AND SCOPE

This value is one of a series of reports covering flood frequency in the conterminous United States. The purpose of the report is (1) to present methods by which the magnitude and frequency of floods for gaged and ungaged sites in the report area can be predicted, and (2) to present all known significant peak flood data.

The area covered by this report (fig. 1) is the Colorado River basin and includes all of Arizona and parts of California, Colorado, Nevada, New Mexico, Utah, and Wyoming. This area is designated as Part 9 in the series of reports published by the U.S. Geological Survey entitled, "Surface Water Supply of the United States."

Flood-frequency reports have been published for New Mexico, Utah, and Wyoming, which are partly within the area covered by this report. A list of publications for these States is included under the section "Selected references."

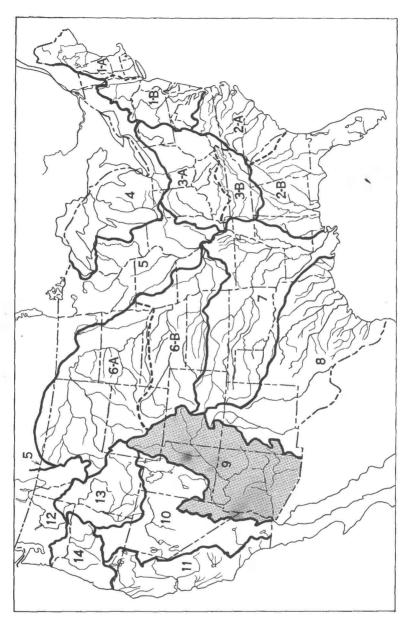


FIGURE. 1 .- Map of conterminous United States. Area covered by this report is shaded.

ACKNOWLEDGMENTS

This report was prepared under the general direction of Francis J. Flynn, chief, Basic Records Section, Surface Water Branch, Water Resources Division, U.S. Geological Survey. Technical guidance was provided by A. Rice Green, hydraulic engineer, U.S. Geological Survey. Basic data were compiled by Geological Survey personnel in the Surface Water Branch district offices of the various States under supervision of the respective district engineers.

Unless otherwise noted in the individual station descriptions, the data were collected by the U.S. Geological Survey with the assistance of many Federal and State agencies, municipalities, corporations, and private individuals. Credit has been given for this cooperation in the annual series of water-supply papers of the Geological Survey prior to 1961 and subsequently in annual Geological Survey surfacewater reports of the various States.

APPLICATION OF THE METHOD

The method of analysis used in this report has been formulated by engineers of the U.S. Geological Survey over a period of years and is outlined by Dalrymple (1960) and Benson (1962). A brief description of the method used is given in the section entitled "Method of analysis" (p. 23).

The method of computing the magnitude of floods having recurrence intervals ranging from 1.1 to 50 years is based on two sets of curves: (1) a composite curve showing as ordinate the ratio of peak discharges to an index flood (mean annual flood) and as abscisse the recurrence interval, in years (fig. 2); and (2) for the northern part of the area (north of about lat 37°), a family of curves showing the relation of the mean annual flood to size and mean altitude of the drainage basin (figs. 3–15), and for the southern part of the area, a curve showing the relation of the mean annual flood to size of the drainage basin only (figs. 16, 17).

The range of these curves is limited by the data upon which the the curves are based; extrapolation of the curves beyond indicated range in basin size, basin altitude, and recurrence intervals exceeding 50 years is not dependable. In the northern part of the report area, where basin altitude is used as a factor, most of the small streams for which records are available to define frequency relations are at the higher altitudes where peak discharges are almost entirely due to snowmelt. Small-area floods resulting from intense rainstorms have occurred at lower altitudes and peak flows for such storms may be considerably greater than those defined by frequency curves based on snowmelt peaks. Extrapolation of curves to small areas at low altitudes could lead to serious errors.

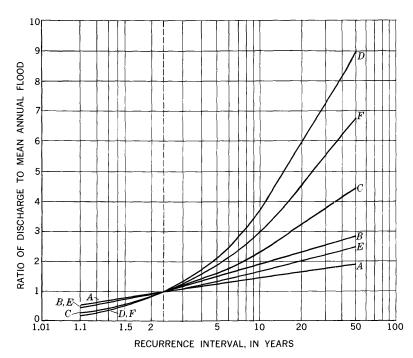


FIGURE 2.—Composite frequency curves for regions A-Γ.

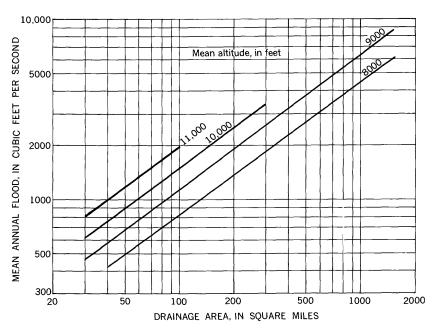


FIGURE 3.-Variation of mean annual flood with drainage area and mean altitude in hydrologic area 1.

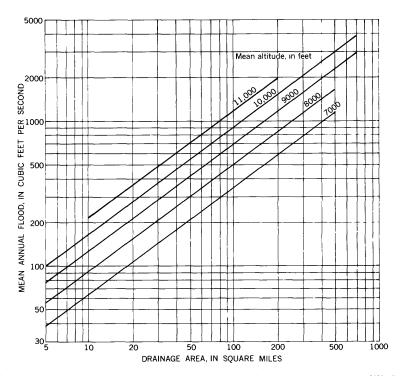


FIGURE 4.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 2.

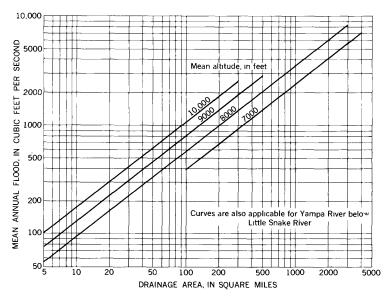


FIGURE 5.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 3. Figure 6 gives variation for Yampa River above Little Snake River and Little Snake River above Muddy Creek.

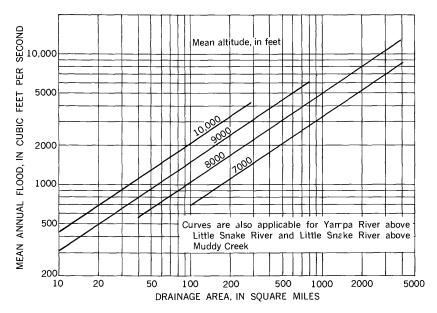


FIGURE 6.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 4.

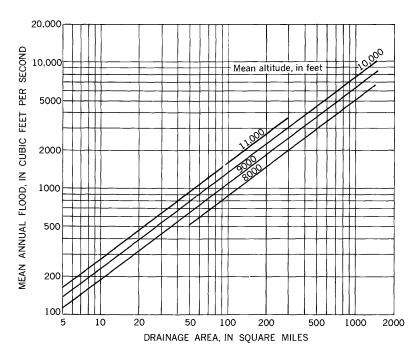


FIGURE 7.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 5. Figure 5 gives variation for Yampa Piver.

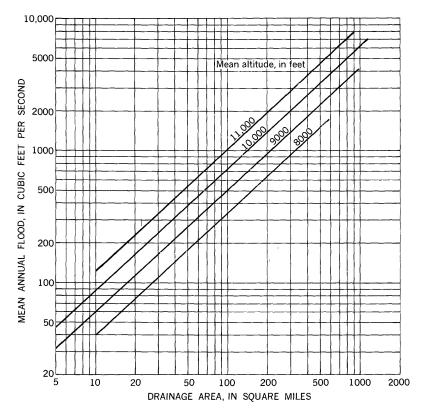


FIGURE 8.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 6.

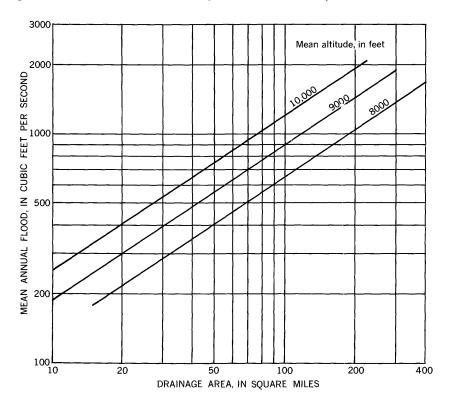


FIGURE 9.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 7.

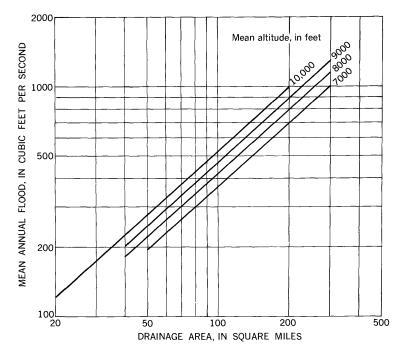


FIGURE 10.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 8.

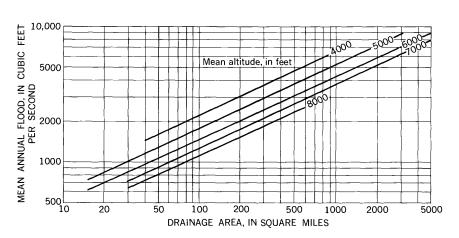


FIGURE 11.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 9.

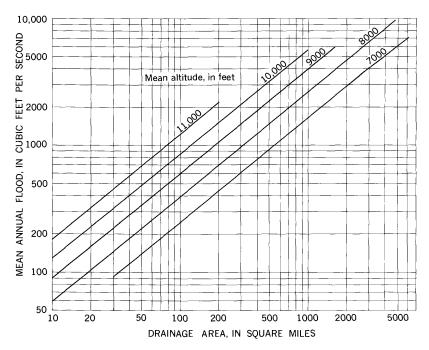


FIGURE 12.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 10.

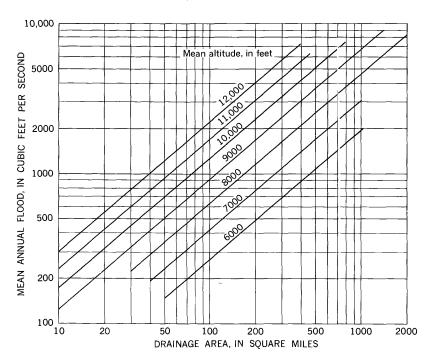


FIGURE 13.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 11.

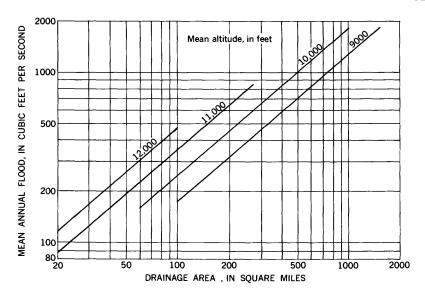


FIGURE 14.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 12.

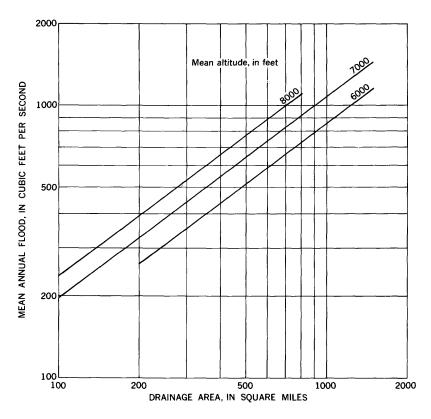


Figure 15.—Variation of mean annual flood with drainage area and mean altitude in hydrologic area 13.

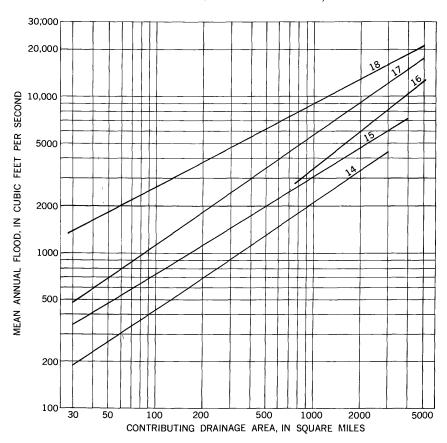


FIGURE 16.—Variation of mean annual flood with drainage area in hydrologic areas 14-18.

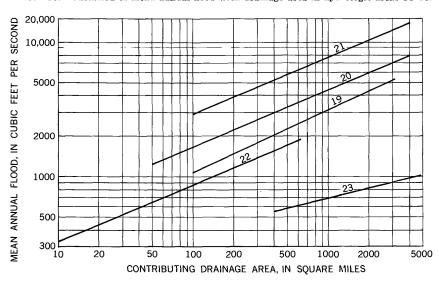


FIGURE 17.—Variation of mean annual flood with drainage area in hydrologic areas 19-23.

In general, flood-frequency relations are shown for uncontrolled drainage conditions. Since 1929, floodflows on Gila River below Coolidge Dam have been largely controlled by major reservoirs on Gila River and several of its principal tributaries. Predictions of expected floodflows under natural conditions for Gila River below Coolidge Dam are of only academic interest; because the effect of regulation has not changed greatly since 1929, frequency relatiors are derived for regulated conditions.

REGIONAL APPLICATION

The following procedure is not applicable to many of the larger streams in the study area. The streams in the excepted category are listed in the section entitled "Special application" (p. 15). Streams whose peak discharges are materially affected by regulation or diversion are also excepted. The general procedure is as follows:

1. If the selected site is not in the excepted category, determine from

- 1. If the selected site is not in the excepted category, determine from plate 1 the flood-frequency region (A-F) and hydrologic area (1-23) in which the drainage basin is located.
- 2. Determine the size of the drainage area upstream from the site.
- 3. For hydrologic areas 1-13 determine the mean altitude of the basin. Mean altitudes used in this report were determined by placing a rectangular grid system overlay on a contour map of the Army Map Series, scale 1:250,000. The altitude at each grid intersection was recorded, and the arithmetic average of the recorded altitudes was used as the mean altitude of the basin. The grid scale chosen should provide, except for very small areas, a minimum of 30 intersections within the basin.
- 4. Determine the discharge of the mean annual flood from the εppropriate hydrologic-area curve (figs. 3–17). For hydrologic areas 1–13 determine the discharge by interpolating between curves or by using the mean-annual-flood equation given in the unnumbered table on page 14.
- 5. From figure 2 determine the ratio of the flood of the selected recurrence interval to the mean annual flood.
- 6. Multiply the ratio to the mean annual flood (step 5) by the mean annual flood (step 4) to obtain the discharge for the flood of the selected frequency.

A complete flood-frequency curve for the site can be defined by repeating steps 5 and 6 for several selected recurrence intervals.

As noted in step 4, to avoid the necessity of interpolating between curves for hydrologic areas 1-13, the mean annual flood can be computed by equation. These equations should not be used indiscriminately for all sizes of drainage basins and basin altitudes. The user should be guided by the range of curves shown in figures 3-17.

[Symbols used: Q_{2-33} , mean annual flood in cfs; A, drainage area in sq mi; H, mean altitude of basin in thousands of feet above mean sea level]

Hydrologic area	Equation	Hydrologic area	Equation
1	$egin{array}{l} Q_{2.33}\!=\!0.10A^{.74}H^{2.70} \ Q_{2.33}\!=\!0.061A^{.74}H^{2.80} \ Q_{2.33}\!=\!0.044A^{.79}H^{2.80} \ Q_{2.33}\!=\!0.077A^{.68}H^{3.06} \ Q_{2.33}\!=\!0.506A^{.76}H^{1.90} \ Q_{2.33}\!=\!0.00325A^{.92}H^{3.50} \ Q_{2.33}\!=\!0.084A^{.68}H^{2.80} \end{array}$	8 9 10 11 12 13	$egin{array}{l} Q_{2.33}\!=\!0.75A^{.92}H \ Q_{2.33}\!=\!1020(A^{.47}\!/H) \ Q_{2.33}\!=\!0.0062A^{.82}H^{3.50} \ Q_{2.33}\!=\!0.021A^{.86}H^{3.06} \ Q_{2.33}\!=\!0.0015A^{.86}H^{3.50} \ Q_{2.33}\!=\!0.35A^{.74}H^{1.5} \end{array}$

ILLUSTRATIVE PROBLEM

Assume that a bridge is to be built across Roaring Fork at Glenwood Springs, Colo., a third of a mile upstream from the mouth and that the bridge is to be designed to pass a flood having a recurrence interval of 50 years. The problem is to compute the discharge for a 50-year flood. This discharge is computed as follows:

- 1. An examination of main stem stations listed under the section "Special application" indicates that Roaring Fork is not in the excepted category. Remarks paragraph in station description for this stream indicates that peak flows are not materially affected by diversions.
- 2. The site is in region A, area 5 (pl. 1).
- 3. The drainage area measured from the best available maps is approximately 1,460 square miles.
- 4. Mean altitude of the basin computed by using a transparent grid overlay on a 1:250,000 Army Map Service map is 9,460 feet.
- 5. The discharge of mean annual flood is determined as 9,190 cfs by interpolating between the 9,000- and 10,000-foot altitude curves (fig. 7) or by solution of the equation $Q_{2.33} = 0.506 \,\mathrm{A}^{.76} H^{1.90} = 0.506 \,(1460)^{.76} (9.46)^{1.90} = 9,190$ cfs.
- 6. The ratio of the 50-year flood to the mean annual flood is 1.9 (fig. 2).
- 7. The discharge of the 50-year flood is 17,500 cfs (9,190 multiplied by 1.90).

If the recurrence interval of a known flood at the bridge site is desired, divide the discharge by the mean annual flood (9,190 cfs) and, using the computed ratio as ordinate, obtain the recurrence interval from figure 2.

SPECIAL APPLICATION

Many of the larger streams in the report area traverse more than one hydrologic area or flood-frequency region. These streams integrate floodflow characteristics of all the areas or regions through which they flow and have flood-frequency relations differing from those of smaller tributary streams. Regional and areal curves are not applicable to these streams, and separate treatment must be given to the streams. They can be placed in two categories: (1) those streams for which composite frequency curves (fig. 2) are applicable, whereas mean-annual-flood curves are not; and (2) those streams for which neither composite frequency curves nor mean-annual-flood curves are applicable.

Those streams classified in the first category are main stems of the following rivers:

Gunnison River below Tomichi Creek,

White River below Piceance Creek,

Duchesne River below Strawberry River,

San Rafael River, and

Virgin River below Santa Clara River.

Individual curves showing variation of mean annual flood with drainage area have been drawn for these streams (fig. 18). Flood magnitudes at sites below points indicated can be determined as outlined under "Regional application" on page 13, except that values of the mean annual flood are taken from figure 18.

Those streams in the second category are main stems of the following rivers:

Colorado River below Eagle River and above Lake Mead, Green River,

San Juan River below Piedra River,

Little Colorado River below Zuni River, and

Gila River below San Pedro River (regulated conditions 1929-62).

For this group of streams, families of curves were drawn showing the relation of discharge for selected flood frequencies to drainage area or, for Gila River, miles upstream or downstream from Coolidge Dam. The curves are shown in figures 19–24. Flood magnitudes for selected recurrence intervals at sites on these rivers can be taken directly from the family of curves by first determining the drainage area above the site or, for Gila River, distance upstream or downstream from Coolidge Dam. Frequency relations for that part of Gila River between Coolidge Dam and San Pedro River should be computed from appropriate regional curves (region D, area 18) using only the drainage area below Coolidge Dam.

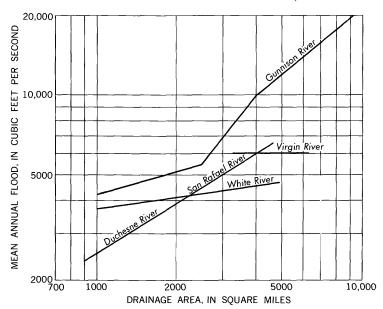


FIGURE 18.—Variation of mean annual flood with drainage area on main stems of Gunnison River below Tomichi Creek, White R'ver below Piceance Creek, Duchesne River below Strawberry River, San Rafael River, and Virgin River below Santa Clara River.

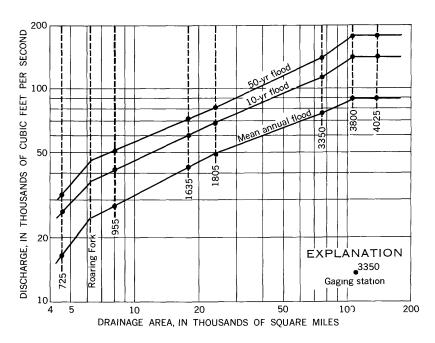


Figure 19.—Relation of discharge for selected flood frequencies to drainage area, Colorado River main stem below Eagle River and above Lake Mead.

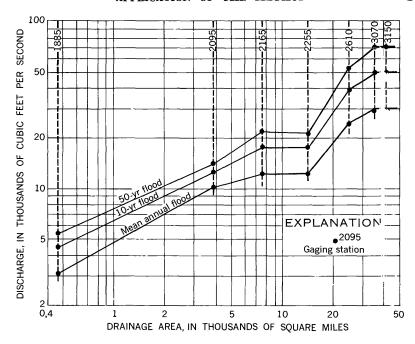


FIGURE 20.—Relation of discharge for selected flood frequencies to drainage area, Green River main stem.

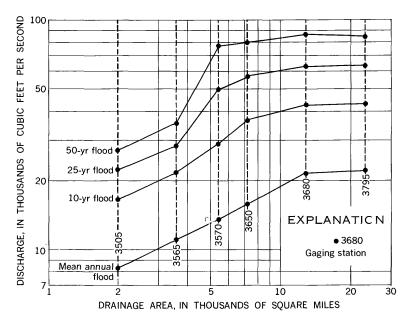


FIGURE 21.—Relation of discharge for selected flood frequencies to drainage area,
San Juan River main stem below Piedra River.

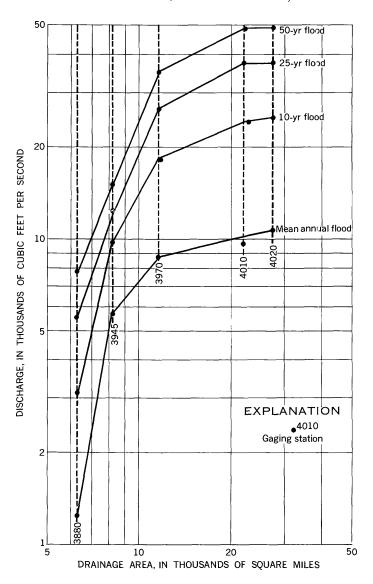


FIGURE 22.—Relation of discharge for selected flood frequencies to drainage area, Little Colorado River main stem below Zuni River.

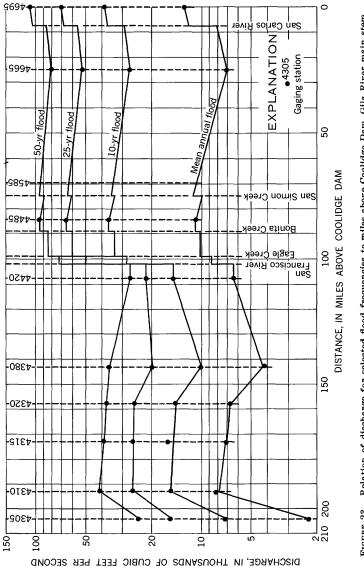


FIGURE 23.—Relation of discharge for selected flood frequencies to miles above Coolidge Dam, Gila River main stem.

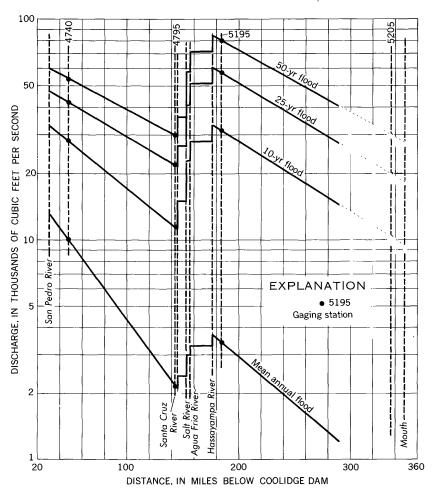


FIGURE 24.—Relation of discharge for selected flood frequencies to mi'es below Coolidge Dam, Gila River main stem below San Pedro River (regulated conditions, 1929-62).

ILLUSTRATIVE PROBLEM

Assume that it is desired to prepare a flood-frequency curve for a site on Gila River just downstream from San Simon Creek:

- 1. This site is 75 miles upstream from Coolidge Dam.
- 2. From figure 23 the magnitudes of floods having recurrence intervals of 2.33, 10, 25, and 50 years at a distance 75 miles upstream from Coolidge Dam are 11,300, 35,000, 64,000, and 96,000 cfs, respectively.
- 3. Discharges determined in step 2 are plotted against corresponding recurrence intervals on plotting paper similar to that shown in figure 2 or on some other suitable plotting paper, and a smooth curve is then drawn through the plotted points.

- 4. If instead the magnitude of a flood having a specific recurrence interval (50 years for example) is desired, the value is taken directly from figure 23. For the 50-year flood in this problem, the discharge is 96,000 cfs.
- 5. Recurrence intervals of predetermined discharges at the site are determined by either interpolating between curves in figure 23 or entering the frequency curve drawn in step 3 with the discharge and reading the recurrence interval from the time (recurrence interval) scale.

DESCRIPTION OF THE REPORT AREA RIVER BASINS

The area covered by this report includes all the Colorado River basin. The Colorado River rises in the rugged Rocky Mountains in north central Colorado, flows southwestward through Colorado, southeastern Utah, northwestern Arizona, and forms the boundary between Arizona and southeastern Nevada, and California before emptying into the Gulf of California in Mexico. The principal tributary of the Colorado River is the Green River, which drains all of Wyoming in the basin as well as northwestern Colorado and much of eastern Utah. Above their confluence in southeastern Utah, Green River drains a considerably larger area than does the Colorado River. Several large tributaries join the Colorado River from the east. These are from north to south: Gunnison, San Juan, Little Colorado, and Gila Rivers. Principal western tributaries to the Colorado River include Dirty Devil and Virgin Rivers. Yampa River in northwestern Colorado is the principal eastern tributary of Green River, and Duchesne River in northeastern Utah is the principal western tributary.

TOPOGRAPHY

Topography in Colorado River basin is extremely varied. Several peaks in Colorado exceed 14,000 feet in altitude and peaks in Wyoming, Utah, and Arizona exceed 12,000 feet. The lower reaches of the Colorado and Gila Rivers are near mean sea level. Fenneman (1931) gives a detailed description of the physiographic divisions in the basin.

The upper Green River basin, including Yampa River, lies in the Wyoming Basin province which is flanked on the east and west by the Southern and Middle Rocky Mountain provinces. The drainage pattern in this basin is most unusual. The Green River in Wyoming is virtually in a closed basin except for a canyon 3,000-feet deep through the Uinta Mountains. One of its eastern tributaries, Bitter Creek, flows across the Rock Springs uplift and cuts through ridges

in notches 1,000 feet deep. The Yampa River traverses the Uinta Range from east to west until it joins the Green River in the midst of the mountains. Headwaters of the Colorado and Gunnison Rivers originate in the rugged mountains of the Southern Rocky Mountain province.

The larger part of the Colorado River basin is in the Colorado Plateaus province, which covers most of the report area in Colorado, Utah, and northern Arizona. This province is characterized by high plateaus modified by various degrees of erosion. Separate plateaus are numerous, and most of them range in altitude from 5,000 to 11,000 feet. Some of the plateaus are higher than the nearby mountain ranges. The most distinguishing feature of the province is its many remarkable canyons of which Grand Canyon is the most spectacular.

That part of the Colorado River basin below the Grand Canyon is in the Basin and Range province and is separated from the Colorado Plateau by the sharp escarpment of the Mogollon rim. The area north of a line running generally through Nogales, Tucson, Phoenix, and crossing the Colorado River below the mouth of Bill Villiams River is about half mountain and half plain. That part of the Colorado basin to the south of this line and the area in Nevada and California is largely desert.

CLIMATE

Wide ranges in temperature and precipitation prevail in the report area. Average temperatures in southwestern Arizora and southeastern California are among the highest in the United States, whereas those in the high altitudes of Colorado and Wyoming are among the lowest. Mean annual precipitation ranges from 4 inches in southwestern Arizona to more than 30 inches in widely scattered mountain areas. The distribution pattern of rainfall between extremes is complex, but in general the amount increases with increasing altitudes.

Flood peaks in the northern part of the report area are usually caused by snowmelt and generally occur in late May or June. The magnitude of snowmelt peaks depends on both the amount of accumulated snow and temperature causing the snowmelt. At the other extreme, in the desert areas of the basin, high intensity storms over small areas are the principal cause of floods. Peak flows in desert areas most frequently occur from July through September. Intermediate between these extremes are floods caused by various types of storms; these floods may occur during any month of the year.

Airmasses which cause precipitation are of various types and come from several sources.

Winter storms are usually caused by moisture-laden polar Pacific air entering the basin from the west or northwest during the period October through May. Accumulation of snow in the high altitudes is usually from this source. Some of the greatest floods in the mountainous areas of Arizona result from these winter storms that cover large regions.

Tropical Gulf air enters the basin from the south and southeast during summer months July through September. This airmass is the source of high intensity convective storms in the south and southwest desert areas.

Tropical Pacific airmasses from the south and southwest are rare but have caused some extreme floods principally in the southwestern part of the report area.

FLOOD-FREQUENCY ANALYSIS

METHOD OF ANALYSIS

Methods used in analyzing data for this report are published in Water-Supply Paper 1543-A (Dalrymple, 1960). Peak discharge data collected at a single point on a stream (a gaging station) are used to define flood-frequency relations at the gaging station. These point relations are then combined to define regional frequency relations that can be applied to both gaged and ungaged sites. Using data collected on many streams in various types and sizes of drainage basins in the Colorado River basin, two basic relations are defined: (1) a composite curve showing as ordinate the ratio of peak discharges to the mean annual flood and as abscissa the recurrence interval in years, and (2) a curve showing the relation between the mean annual flood and the physical characteristics of the basin.

RECORDS USED

Peak data for 603 gaging stations on streams in the Colorado River basin are included in this report. Of this number, records for only 342 stations were used in the regional analysis. Records for 39 additional stations were used to define flood-frequency relations for some of the larger streams. In general, only records for those stations having 10 or more years of peak discharge record not materially affected by regulation or diversion were used.

FLOOD FREQUENCY AT A GAGING STATION TYPES OF FLOOD SERIES

Flood-frequency data at a gaging station can be analyzed either as an annual flood series or as a partial-duration flood series. In the annual flood series, only the highest peak discharge during each water year (Oct. 1–Sept. 30) is used. The partial-duration series includes all peaks above a selected base. Although the annual flood series does

not take into consideration some high floods that are not the highest for the year, it has the advantage of being a complete duration series and is adaptable to mathematical analysis. The annual flood series has been used for analysis in this report.

Langbein (1949) shows by statistical principles that the two methods give nearly the same results for recurrence intervals of 10 years or more. The relation between the values in the two series is shown in the following table.

Recurrence intervals, in years

	Partial-du	ration	I		Partial-d	uration
Annual flood series	flood se	ries	Annual	flood series	flood	series
1.16		0.5	10.5			10.0
1.58		1.0	20.5			20.0
2.00		1.45	50.5			50. 0
2.54		2.0	100.5			100.0
5.52		5. 0				

This table can be used to compute values for the partial-duration series from curves shown in this report. There is a distinction in meaning of "recurrence interval" between the two series. In the annual flood series, recurrence interval is the average interval of time within which a given flood will be equaled or exceeded once as an annual maximum. In the partial-duration series, the recurrence interval is the average interval of time within which a given flood will be equaled or exceeded once without regard to its relationship to the water year or any other period of time.

FLOOD-FREQUENCY CURVES

A flood-frequency curve shows the relation between the annual peak discharge and the recurrence interval. Data are plotted on a special form based on the theory of extreme values (Powell 1943). Recurrence interval, the time scale, is computed by the formula T = (n+1)/m, where T is the recurrence interval in years, n is the number of years of record, and m is the order number, beginning with the largest flood as number 1. The frequency curve for Gila River near Clifton, Ariz., is shown in figure 25. This curve is based on records for the period 1911–62 (53 years). The greatest flood discharge during this period was 28,200 cfs. By substituting this amount in the formula, the recurrence interval can be computed as $T = \frac{53+1}{1} = 54$. The recurrence intervals for other annual peaks are computed in the same manner and are plotted against corresponding discharge. A smooth curve is fitted to the plotted points by visual inspection. Less weight is given to extreme values whose true recur-

rence intervals may not be known.

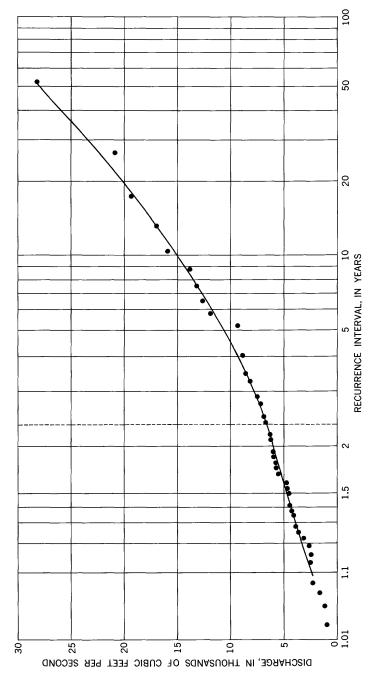


FIGURE 25 .- Flood-frequency curve for Gila River near Clifton, Ariz.

For the annual flood series, the probability of occurrence of a flood during a given year is the inverse of the recurrence interval; thus, a 10-year flood has a 10 percent chance of occurring in any year and a 50-year flood has a 2 percent chance of occurring in any year. It should be emphasized that there is no implication that a 10-year flood will occur once every 10 years or that one 50-year flood will occur each 50 years. The relations between selected recurrence intervals and probability of occurrence during selected time periods are shown in the following table.

Recurrence interval of flood (years)		, flood of indica or more times	ted recurrence during indicate	interval being d time period
	10	25	50	100
10	0. 65	0. 928	0. 9948	0. 99997
20	. 34	. 64	. 87	. 983
50	. 18	. 40	. 64	. 87
100	. 10	. 22	. 40	. 63

REGIONAL FLOOD FREQUENCY

To permit regional application of flood-frequency relations defined at individual gaging sites, flood-frequency curves are combined in two ways. First, based on gaging-station records, a curve is drawn to show the relation between the mean annual flood and the significant basin characteristics. Secondly, the records are combined on the basis of similarity of the individual frequency graphs. This step defines a composite dimensionless curve representing the ratio of the discharge of a flood of any frequency to that of an index flood (the mean annual flood).

MEAN ANNUAL FLOOD

The mean annual flood is, by definition, a flood having a recurrence interval of 2.33 years in the annual flood series. According to the theory of extreme values, the arithmetic mean of all the annual floods has a value corresponding to the flood of 2.33-year recurrence interval. The mean annual flood is not seriously influenced by floods of extreme magnitude but is defined mainly by floods of average regnitude. It has been found to be a good index of geographical variation of floodflow and has been used as the index flood in this report. The mean annual flood can be defined by use of a shorter period of record than can floods of greater recurrence interval.

The mean annual flood at each of the 342 gaging stations used in the regional analysis was computed and adjusted to the period 1911-62. These data were then graphically correlated with drainage-basin size as the independent variable. Introduction of mean basin altitude as as the independent variable. Introduction of mean basin altitude as a second independent variable was found to improve the correlation in the northern half of the report area (north of lat 37° N.). On the basis of the correlations, 23 hydrologic areas were defined. The hydrologic areas are outlined on plate 1 and corresponding curves of relation are shown in figures 3–17.

COMPOSITE FREQUENCY CURVES

The Colorado River basin was divided into six homogeneous regions, (A-F), on the basis of the slopes of the individual frequency curves for the 342 gaging stations used in the regional analysis. The geographical extent of these regions is outlined on plate 1. Before combining a group of stations into a region, a homogeneity test was made to determine whether the slopes of the individual curves differ more than might be expected in random sampling. The composite frequency curves shown in figure 2 show the relation of flood peaks to the mean annual flood in each of the six regions. These curves were derived by computing ratios of floods to the mean annual food at recurrence intervals of 1.1, 1.5, 5, 10, 25, and 50 years, and then computing the median at each recurrence interval for each of the regions.

SUMMARY

Curves presented in this report can be used to predict the magnitude of floods having recurrence intervals between 1.1 and 50 years on most streams in the Colorado River basin. In general, flood-frequency relations are for natural conditions and are not applicable to streams whose peak flows are materially affected by regulation or diversion. The composite frequency curves (fig. 2) cannot be used with confidence for recurrence intervals greater than 50 years, nor should mean annual flood curves (figs. 3–17) be extended above or below the limits shown.

Frequency curves for the main stem of Gila River below San Pedro

River are based on regulated peak flows for the period 1929-62.

Both the size and the mean altitude of the drainage basin are used as independent variables for determining the mean annual flood for that part of the Colorado River basin north of latitude about 37° N. Only drainage basin size was used as an independent variable in the southern part of the basin. The delineation of hydrologic areas recognizes indirectly the effect of other variables.

FLOOD RECORDS AT GAGING STATIONS AND MISCELLANEOUS SITES

A summary of maximum known stages, discharges, and other pertinent data for the 603 gaging stations for which records are included in this report is contained in table 1. Table 2 contains a summary of similar data for miscellaneous sites and for outstanding floods at gaging stations having less than 5 years record through 1962. The data are listed in the downstream order currently being used by the Geological Survey. The station numbers shown in table 1 are permanent reference numbers used in Geological Survey water-supply papers since 1958. The location and station number of the stations included in table 1 are shown on plate 1. Because all stations are in Part 9, the prefix denoting the "part" has been omitted. Sites for data in table 2 have been numbered consecutively beginning with number 1. The period of known floods is the period, in water years, during which the listed peak is known to be the maximum and does not necessarily indicate that all annual floods are known for the period.

Following the tables of maximum known floods is a compilation of flood peaks for the 603 gaging stations listed in table 1. A brief description of each gaging station is accompanied by a tabulation of peaks. Both peak stages and discharges are usually given, however, for a few gaging stations, only peak stages or peak discharges are given. If the peak stage and discharge occur on different days, the date of peak discharge is included, and a footnote indicates the date of peak stage.

Peak discharges, unless otherwise noted, are instantaneous peaks expressed in cubic feet per second. The peaks are generally arranged by the water year, which begins October 1, ends September 30, and is identified by the year in which it ends; thus a peak that occurred November 19, 1959, would be listed in the 1960 water year. For a few peak discharges, the calendar year was used, and this fact is noted.

Underlining in tables of peak stages and discharges has the following significance:

- Underline in "water year" column means a discontinuous record.
 Underline beginning at "date" column and continuing through "discharge" column means a change in site and datum.
- 3. Underline in "date" and "discharge" column means a change in site but not a change in datum.
- 4. Underline in "gage height" column means a change in datum.5. No underlines are used for changes in site or datum if records
- have been adjusted to present conditions.

Gaging-station records of less than 5 years duration through 1962 or records on irrigation or diversion ditches are not included in this report.

MAXIMUM KNOWN FLOODS
Table 1.--Maximum stages and discharges at gaging stations

	Table	T.~-Max	I.~-Maximum stages	and discharges	at gaging	Stations					
		Flood			7.72		Ma	Maximum e	stage and	discharge	
;		region and	Drainage	Mean	Period of	Areal				Discharge	rge
oz	Gaging station	hydro- logic area	area (sq m1)	elevation (feet)	known floods (water years)	Q2.33 (cfs)	Date		Gage height (feet)	Cfs	Recur- rence interval (years)
			Colorado 1	River main	stem						
105	Colorado River below Baker Gulch, near Grand	1	53.0	,	1953-62	1	June 30,	1957	7.19	976	ı
110	Colorado River near Grand Lake, Colo	_	103		1905-18,1935-62	,	June 15,	1918	7.0	1,840	1
			Little Columbine	nbine Creek	Creek basin						
115	Little Columbine Greek above Shadow Mountain Reservoir, at Grand Lake, Colo.	A5	1.3	8,600	1950-55	36	May 3,	1952	2.21	34	2.0
			Grand Lake	outlet basin	sin						
125	North Inlet at Grand Lake, Colo	A5	46.6	10,600	1906,1911-12,	810	June 7,	1952	6.52	011,1	7.2
135 140	East Inlet near Grand Lake, Colo	A5 A5	27.1	10,400	1905-9,1911-13	1,160	June 17, June 20,	1949	3.90	1,320	7.2
			Colorado 1	River main	stem						
150	Colorado River below Shadow Mountain Reservoir, Colo.		190		1948-59		July 3,	1957	5.78	3,600	1
			Columbine	Creek basin	ın						
155	Columbine Creek above Lake Granby, near Grand Lake, Colo.	A5	7.3	068'6	1950-55	176	June 10,	10, 1952	2,58	130	1.4
			Arapaho	Creek basin	u						
165	Arapaho Creek at Monarch Lake Outlet, Colo	A5	47.1	10,700	1945-62	830	June 11,	1952	37.1	1,300	14
170	Arapaho Greek below Monarch Lake, Colo	A5	59	10,600	1935~44	982	June 22,		4.31	1,380	8.0
			Colorado 1	River main	stem						
195	Colorado River near Granby, Colo		322	1	1908-11,1934-53, 1962		June 20,	1909	5.50	4,100	,
			Willow	Creek basin							
200	Willow Greek near Granby, Colo	A6 A6	105 128	9,610 9,530	1935-53 1954-60	647 741	June 8, June 7, May 27,	1952 1957 1958	5.44	1,280	11 26 -
			Fraser	River basin							
240 250 265	Fraser River near Winter Park, Colo	A6 A6 A6	27.6 27.8 32.8	10,800	1911 -62 1935-62 1935-62	285 287 302	June 13, June 10, June 15,	1918 1952 1952	2.9 2.13 2.89	820 470 470	*1.51 20 14

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	Table 1M	1Maximum s	stages and di	discharges s	at gaging stations Continued	sCont1	nned				
		Flood						Maximum	stage and	discharge	
		region	Drainage	Mean	Period of	Areal				Discharge	ge
No.	Gaging station	hydro- logic area	area (sq m1)	elevation (feet)	known floods (water years)	Q2.33 (cfs)	А	Date	Gage height (feet)	Ofs 1	Recur- rence interval (years)
			Blue River	basinContinued	lnued						
505 510 515	Tenmile Creek at Dillon, Colo. Straight Creek near Dillon, Colo. Willow Creek near Dillon, Colo.	A6 A6	113 12.8 13.5	11,000	1911-19,1930-60 1944-52 1943-51	1,110	June June June 2	4	5.82	2,010 234 210	37 14 13
520 525	Rock Creek near Dillon, ColoBoulder Creek near Dillon, Colo	A6 A6	15.8	10,700	1943-56 1943-51	165	July June 1 June 2	7, 1951 18, 1951 21, 1943	2.4 4.35 7.35	260	15 *1.23
530 535	Slate Creek near Dillon, ColoBlue River above Green Mountain Reservoir,	A6 A6	16.8 514	10,400	1943-54 1944-62	159			4.03 4.09 6.09 7.09 8.09	288	37 5.5
540	Colo. Black Creek below Black Lake, near Dillon,	A5	15.2	10,800	1943-49	360	Nov. July	1, 1943	4.72	384	2.7
545	Black Creek above Green Mountain Reservoir,	A5	18.2	10,500	1944-53	388		8, 1946	2,63	00%	1 0
550	Otter Creek above Green Mountain Reservoir,	AS	9.6	006,6	1944-53	217	June 2	21, 1951	1.59	100	* ,
555	Cataract Creek above Green Mountain Reser-	A5	14.4	10,200	1944-53	312	June 2	1361 ,12	2.69	416	8.5
560 575	Volr, Colo. Blue River near Kremmling, Colo Blue River below Green Mountain Reservoir, Colo.	1 1	560 599	1 1	1905-8 1938-62	1 1	June l June	14, 1906 4, 1938	5.93	7,820	I t
			Colorado R	River main s	stem						
580	Colorado River near Kremmling, Colo	-	2,360	-	1905-18,1962	,	June	7, 1912	21.80	21,500	'
			Piney R	Piney River basin							
585	Piney River below Piney Lake, near Minturn,	A5	13.0	10,700	1948-54	313	June 1	11, 1952	5.47	396	5.3
595	Piney River near State Bridge, Colo	A6		10,700	1945-62	754	June	8, 1952	5.61	1,110	10
İ			Rock Cr	Creek basin							
605	Rock Creek near Toponas, Colo	A6	48	9,310	1953-62	182	Apr. 1	18, 1962 12, 1962	a 5.49 4.80	482	- 92
			Big Alkali	1 Creek basin	1n						
609	Catamount Creek near Burns, Colo	A6	5.88	9,100	1956-61	38	May	9, 1957	3.86	38	2.33
			Cabin C	Cabin Creek basin							
610	Sunnyside Creek near Burns, Colo	A6	10	9,390	1953-58	68	May 2	28, 1957	4.03	110	18

	21 *1.28	12 5.0	3.0	٠,	14 4.4	5.2	1 0 %	14	, [10.		3.6		40	6.8 27	1 4	· ·	34 1.75		. i	*1.20	. 02	ו	6.	4.6 6.5		*1.09
					365	1,780	2,60	775	6,600	6,580		19,100		3,170				1,320			2,980		00#.1	800	146	1 1	19,000
	4.0	6.84	, n	6.65	5.42	a5.70	6.02	5.10	0.0	9.17		11.56		7.2	30.5	5.55	5.80	6.52	6.60	2.0	7.48	90	4.4	,	2.86	a 4.53	
		1953								1952		1952		1917	1925	1957	1948	1958	1952	1917	1917			1957			1957
		24,	30,	18,					, L	29,		9,		18,	15,		25,	13,	ا ۾		25,	, 6	27,	œ -	15,	24,	1,
	June	June	June	June	June			June	June	June		June		June	June	June	May	June	June	June	June July	1	Aug.	June	May	Apr.	July
	604 275	715	685	376	599	1,400	200	200	- 8.	4,710		16,200		1,720	630	1,420	740	242	265	,	1,310	, ,	642	Ċ	110	9.190	
	1911-25,1944-62 1914-20,1944-56	1948-54 1911-18,1944-62	1956-62	1948-56	1948-56	1944-56	1911-24	1951-62	1905-9	1947-62	stem	1941-62 1900-62	u,	1911-21,1932-62	1913-19	1911-15,1948-62	1911-16,1948-62	1950-56	1950~56	1911-20	1911-1917 1956-62	1035-69	1951~60	100	1951-55	29-9061	
River basin	10,400	400,11	11,100	11,300	10,800	10,400	0 770	9,890	002	9,450	River main	1 1	Fork basin	11,200	11,000	11,000	10,600	11,100	10,200	f	001,11	000	080,6	0	002,6	9.460	.,
Eagle F	72.2	33.2	33.5	14.4	11.8	100	650	71	844	957	Colorado R	4,390	Roaring	109	62	89.5	41.2	8.4	32	175	177	000	92		9.0	1.460	
	A6 A6	A5 A5	A5	A5	A5	A5	96	A6	1 9	A6				AS	A6	A 5	A 5	AS	A5	,	A5	ц	A3		A3	A5	
	Eagle River at Red Cliff, Colo	Homestake Creek at Gold Park, Colo	Cross Creek near Minturn, Colo	Gore Creek at upper station, near Minturn,	Colo. Black Gore Creek near Minturn, Colo	Gore Creek near Minturn, Colo	CLOS of soft to rest of soft	Brush Creek near Eagle, Colo	Eagle River at Gypsum, Colo	Tagle River below Gypsum, Colo		Colorado River near Dotsero, Colo		Roaring Fork at Aspen, Colo	Hunter Creek near Aspen, Colo		North Fork Fryingpan Creek near Norrie,	Colo. Lime Creek at Troutville, Colo	Lime Creek at Thomasville, Colo	Fryingpan Greek at Thomasville, Colo	Crystal River at Marble, Colo	Redstone, Colo.			Cattle Creek near Carbondale, Colo	Resuring Home at Alenwood Springs, Colo.	
	635	640 645	651	655	099	665	275	680	690	2002		705		735	750	780	785	790	795	800	815 816	300	830	3	845	05.0	3

See footnotes at end of table.

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	W T ATORT	MAXIMUM S	rages and ar	s cuarges s	Maximum stages and discharges at gaging stations continued	TO DO - S	nen				
		F 000					Ma	ximum s	tage and	Maximum stage and discharge	
		region	- Contract	, and a	,	[00m		_	_	Discharge	90
No.	Gaging station	and hydro- logic area	Drainage area (sq mi)	mean elevation (feet)	ਨ ≥	Arear Q2.33 (cfs)	Date		Gage height (feet)	Ofs 1	Recurrence interval (years)
			Canyon	Creek basin	n						
855	Canyon Creek near New Castle, Colo	A3	54.3	9,200	1955-60	202	June 29, July 1,	1957	09.6	1,000	*1.05
			Elk Cr	Creek basin							
875	Elk Creek at New Castle, Colo	A3	177	8,650	1955-60	1,110	June 10,	1957	6.23	1,770	15
			Garfield	Creek basin	.tn						
880	Baldy Creek near New Castle, Colo	A3	16.1	8,700	1926-61	168	June 2,	1957	5.80	242	9.3
			Divide	Divide Creek basin	r.						
890	West Divide Creek below Willow Creek, near Raven, Colo.	A3	32.7	8,760	1939-47	304	May 13, May 15,	1941	3.33	876	*1.52
			Rifle C	Creek basin							
915	East Rifle Creek near Rifle, ColoRifle Creek near Rifle, Colo		32 140	1 (1937 -43,1957 -62 1940-46,1953-62	1 1	Aug. 5, July 18,	1937	4.00 6.14	409 758	' '
			Beaver	Creek basin	ri.						
925	Beaver Creek near Rifle, Colo	A6	7.90	9,400	1953-62	56	June 5, May 12,	1957	3.71	- 72	5.4
			Battlement	t Creek basin	ısın						
926	Battlement Creek near Grand Valley, Colo	A6	8.31	9,350	1957 -62	57	June 7,	1957	2,79	102	30
			Parachute	Creek basin	ıtn						
930	Parachute Creek near Grand Valley, Colo	A6	144	8,190	1949-54	200	May 5,	1952	- 4	738	11
935	Parachute Creek at Grand Valley, Colo	A6	200	7,920	1921-27,1949-54	582			4.99	912	14
			Roan C	Creek basin							
950	Roan Creek near De Beque, Colo	ı	210	-	1921-26	1	May 21,	1922	4.45	1,110	1
ı			Colorado F	River main	stem						
955	Colorado River near Cameo, Colo	ı	8,050	1	1934-62	27,200	June 16, June 8,	1935	11.60	36,000	6.4
			Plateau	Creek basin	ıtı						
96	Plateau Creek at upper station, near	A5	24	9,400	1937-43,1952-58	297	May 27	27, 1942	3.90	450	3.4
365	Plateau Creek near Collbran, Colo	A 5	88	9,780	1922-62	1,130	May 27	27, 1922	06.9	3,080	*1.43

636 5.01	968 1,630 317 *1.08	750 - 101 - 1	144	100 64 140 3.3			52,400 46		1,020 1.65	3,760	1,270		1,240 4.4			1,260 9.6		804 *1.20			7,140 6.0	
5.82	5.05 7.80 4.35 4.91	3.00	2.51	22.30	a 3.41		24.4		2.80	1	5.32	200.00		4.13 3.47 6.60	6.62	4.65		3.66	6.37	5.02	5.11	
1957	1941 1941 1957		1941		1951		1951		1933 1957	1920	1948	1951	1945	1948					1948	-	1957	
4,	13,		13,	18, 12,			, 16,		31,		, et :		45,	2,0,5	23,						22,	
June	May May June May	June	May June	May May May	Jan		June		May	June	May	May	June	May June June	Jul	May	June	June	May	May	June	
506	612 906 154 360		1 1	- 124	1		29,000		1,180	1	890	236	1,020	296		858	4,200	354 466	•		1,440	
1956-62	1937-42 1922-62 1956-62 1946-56	1939-44 1946-57	1937 -43 1945-53	1937 -41 1937 -43 1937 -60	1936-62	stem	1902-33	ıİn	1930-34 1939-62	1913-62	1940-51	1942-46	1940-51	1940-51	1945-50	1940-50,1959-62	1912-28,1945-62	1917-22,1938-62	1945-51	1940-48	1938-62	
9,260	8,920 8,660 9,550 10,200	1 1	1.1	9,920	1	River main	-	River basin	11,000	ı	11,000	10,800	10,200	10,900	1	066,6	10,200	10,300			9,640	
52.2	76.5 139 10.6 17	25.3	19.7	10.01	604	Colorado R	8,790	Gunnison	121 245	440	89.2	8.5	69	27.7	17.5	124	1,010	155	586	346	1,020	
(A3	A 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1 1	1.1	- A3	ı		-		A6 -		A6	A5	A5	A6	AS	A6 _	A6	A12	6	1	A12	
Buzzard Creek below Owens Creek, near	Helberger, Oolo. Buzzard Greek near Gollbran, Colo. Buzzard Greek near Collbran, Colo. Brush Greek near Collbran, Colo. Big Greek at Upper Station, near Collbran,	Colo. Big Greek near Collbran, Colo Cottonwood Greek at upper station, near	Molins, Colo. Cortonwood Greek near Molina, Colo Bull Greek at upper station, near Molina,	Colo. Bull Creek near Molina, Colo Coon Creek near Mesa, Colo Mesa Creek near Mesa, Colo	Plateau Creek near Cameo, Colo		Colorado River near Palisade, Colo	The same of the sa	Taylor River at Taylor Park, ColoTaylor River below Taylor Park Reservoir,	Colo. Taylor River at Almont, Colo	East River near Crested Butte, Colo	Coal Creek near Crested Butte, Colo	Slate River near Crested Butte, Colo	Cement Creek near Crested Butte, Colo	Castle Creek near Baldwin, Colo	Ohio Creek near Baldwin, Colo	Gunnison River near Gunnison, Colo	Tomichi Creek at Sargents, Colo	Tomichi Creek at Parlin, Golo.	Cochetopa Greek near Parlin, Colo	Tomichi Creek at Gunnison, Colo	
968	970 975 976 995	1000	1010	1020 1040 1045	1050		1060		1070	1100	1105	1110	1115	1120	1130	1135	1145	1155	1170	1185	1190	

i		eg.	Recur- rence Interval (years)		*1.59	48 7.0	3.2	92	2.1 15 *1.12	14	' (*1.73	ı	34 34	40	20 -	*1.18	*1.01	* E	*1.15	*1.36			111
	discharge	Discharge	Cfs 1		2,150	1,000	1,560	1,720	2,700 480 1,790 1,840	542	- 0	1,050	267	2,190	3,400	402	7,860	9,590	018.1	1,420	320	358	09	127
	stage and		dage height (feet)		- 2	6.07	4.50	4.5	4.3 4.20 8.32 7.68	5.05	15,35	- (a)	6.05	5.80	5.80	5.17	6.9	3.0	5.10	4.00	20.00	9.20		6.80
	Maximum		0				1361	1929	1957 1957 1957 1952	1948	1920	1957	1947	1941	1952	1957	1957	1932	1937	1921	1952		4 ~ f	1946 1946 1941
	Max		Date			, 6, 5, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,		у 25,	e 29, e 28, e 11,	. 29,		၈၈၈ ပြွတ်လို				e 28,		12, 10,				. 14,	12,	June 16, July 19, May 1144,
inued					May		May	July	June June June	Apr.		June	_	May			June				May	Apr	May	Jul
sCont		Anos	02.33 (cfs)		710	533 651	1,400	1,000	2,850	346	10,000	320	٠	1,220	1,850	, C	4,470		009	648	124	1 1		1.1
at gaging stations Continued		Pantod of	known floods (water years)	ontinued	1938-55	1956-62 1914,1946-52	1918-24,1929,	1918-19,1929,	1938-62 1946-62 1955-62 1943-52	1917-19,1946-54	79-9061	1936-62	1948-52	1935-53	1950-55	00-0001,04-001	1922-30,1932	1935-47	1937-56,1961-62	1917-26	1948-54	1942-46	1940-46	1941-46 1941-46
discharges a		Mean	elevation (feet)	River basinContinued	10,400	9,950	11,500	11,600	10,800	9,620	1	9,280			_	'	8,690		9,320	076,8	7,340		•	1 1
		Duetneme		Gunnison Rive	334	57.3 85.5	123	82	338 31.8 66.8 232	39.1	3,980	42	19	136	246		702	41.3	43	25	36#	11.2	12.9	19
aximum s	Flood	region	hydro- logic area	5	A12	A10 A10	A6	A6	A6 A10 A10	A 10	¥	A10		A5 A5	A5	5 R	A5	1 :	A5	A.5	A10	, ,	,	1 1
Table 1 Maximum stages and			daging station		Cebolla Creek at Powderhorn, Colo	Soap Creek near Sapinero, Colo	Lake Fork at Lake City, Colo	Henson Creek at Lake City, Colo	Lake Fork at Gateview, Colo. Guresant, Creek near Sapinero, Colo. Gimarron Creek near Gimarron, Colo. Gimarron Creek helow Squaw Greek, at	Crystal Creek near Maher, Colo	Gunnison River below Gunnison tunnel, Colo	Smith Fork near Grawford, Colo	Iron Creek near Crawford, Colo	Bast Muddy Creek near Bardine, Colo	Muddy Creek at Bardine, Colo	North Rouk Guntagon River nees Nomenset	Colo. North Fork Gunnison River near Paonia, Colo.	Minnesota Creek near Paonia, Colo	Leroux Creek near Cedaredge, Colo	Leroux Creek near Lazear, Colo		Tongue Creek near Cedaredge, Colo	Klaer Creek near Cedaredge, Colo	Cottonwood Greek near Gedaredge, Colo Youngs Greek near Gedaredge, Colo
			No.		1220	1225	1235	1240	1245 1250 1260 1270	1275	1280	1285	1295	1305	1315	1325	1330	1340	1545	1350	1365	1380	1405	1410

,		1111	o	*1.01 4.7 17	2:1	4.4	*1.14	27		*1.09	90.1. *1.06		6.7		8.0 *1.09	29 *1.16	1111
193	578	1,190	Tee -	2,000	187	297	500	1,360 4,080 1,850	2,500	2,950			125,000		2,120		5,460 59 678 151
3.78	3.62	4.55	00.9	6.05	6 15.5 3.40 a 3.97		94.74 4.60	4.96 7.70 (b)	2000	7.76	14.95		18.5		6.15	4.97 7.58 10.30 3.07 8.6	2.31
1952	1941				July 28, 1927 July 2, 1957 March or April	1949			1903		1950		1884		1952	1941 1941 1959 1945	
18,	12,	ว์ห์ห์ด้	ູ່ນີ້	1,0,4,0	, 20 to 10 t	1367							4,0,		10,	14, 13, 14,	25, 27,
Apr.	May	Apr May May	oct.	June Oct.	July July March	June	July Aug.	July June June May	June	Aug	May		July		June Oct.	Oct. Oct. Aug. May	May 1, June 25, Sept.27, Aug. 8,
1	ı	- 319	694	1,080	192	210	154	780	ı		17,800		42,300		1,180	3,420	111
1945-52	1940-62	1917-62 1941-51 1948-55	1911-24	1911-15 1914-29	1956-62	1948-53,1961-62	1956-62 1922-27,1956-62	1956-62 1903-5,1921-62 1896-99,1908-10	1903-5,1914	1903-31,1939-62	1897-99,1902-6, 1897-99,1902-6, 1917-62	stem	1884-1962 1951-62	1n	1896-1903,1912,	1922-27,2-62 1927-23,1942-48 1937-62 1945-51 1918-22	1946-51 1954-52 1945-52
ı	ı	11,300	11,400	11,500	10,500	10,600	8,950	10,900	ı	000		River main		River basin	10,800	9,120	111
28	28	39.5 55 17.8	77	26 76	13.2	16.8	7.88	41.1 437 490	565	245	7,870	Colorado R	17,100	Dolores	105 556	81 793 145 21.9 1,910	255
	•	_ _ B10	B10	B10 B10	B10	B10	B5 -	A5 -	ı	A5	A A				B10 B10	B10 B10	111
Ward Creek below Kiser Creek, near Cedar-	edge, Colo. Surface Creek near Cedaredge, Colo	Surface Creek at Cedaredge, Colo Surface Creek at Eckert, Colo Red Mountain Creek near Ironton, Colo	Uncompandere River at Ouray, Colo	Canyon Creek at Ouray, Colo	West Fork Dallas Creek near Ridgway, Colo	East Fork Dallas Creek near Ridgway, Colo	Pleasant Valley Creek near Noel, Colo Dallas Creek near Ridgway, Colo	Cow Creek near Ridgway, Colo	Uncompangre River at Montrose, Colo	Robbideau Greek at mouth, near Delta, Colo	Namnan Creek near WhiteWater, Colo		Colorado River near Fruita, Colo		Dolores River below Rico, Colo	Lost Canyon Creek at Dolores, Colo Dolores River near McPhee, Colo. Disappointment Greek near Dove Creek, Colo. Twomile Creek near La Sal, Utah Dolores River at Bedrock, Colo.	Buckeve Reservoir Outlet near Paradox, Colo. West Paradox Greek near Paradox, Colo West Paradox Creek near Bedrock, Colo
1420	1430	1435 1440 1445	1450	1455 1460	1464	1465	1466	1471 1475 1480	1490	1505	1525		1530 1635	1	1650 1665	1670 1675 1681 1690 1695	1700 1705 1710

See footnotes at end of table.

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	Table 1 M	aximum s	stages and di	scharges a	Maximum stages and discharges at gaging stationsContinued	sConti	med				
		Flood						Maximum	stage and	d discharge	
;		region	Drainage	Mean	Period of	Areal				Discharge	eg.
• o	Gaging station	hydro- logic area	area (sq m1)	elevation (feet)	× ×	Q2.33 (cfs)]	Date	Gage height (feet)	Cfs	Recur- rence interval (years)
			Dolores River	r basinContinued	utinued						
1715	San Miguel River at Fall Creek, Colo	- 0.18	172	09.760	1896-99	322	June	23, 1898		1,370	*
1721	Leopard Creek at Noel, Colo	BIO	9.11	9,680	1956-62	109				100	1.95
1725	San Miguel River near Placerville, Colo	B10	308	10,000	1909-62	2,160	Sept.	5, 1909		10,000	*1.63
1735	Horsefly Creek near Sams, Colo	382	23.3	090,6	1943-51	356				1,030	*1.02
1740	San Miguel River near Nucla, Colo	Blo	660 43	9,180	1954-62 1942-51	3,000	Apr.		7.80	3,810	3.4
1750	Naturita Creek near Norwood. Colo	B10	7. 72	9,180	1941-52	221				321 943	8.8 8.03.
1755	Tahamasha Graek nash Nucla Colo	B10	1,080	8,440	1918-29,1941-62	3,360	Apr.		9.80	7,100	0.0
2		2		2	2	3	May			3	2
1770	San Miguel River at Uravan, Colo	B10	1,550	8,000	1955-62	3,740	Apr.	19, 1958	11.75	069'9	8.0
			ļ				Apr			555	*1.70
1780	Deep Creek near Paradox, Colo		ı	1	1945-53		June			•	
1790 1795 1800	Roc Creek near Uranium, Colo	Bio	69.5 4,350 4,580	096,7	1945-52 1937-54 1951-62	8,490	July May Apr.	10, 1952 14, 1941 21, 1958	12.85	885 15,400 17,400	8 1 2 1
			Colorado	River main	stem					ĺ	
1805	Colorado River near Cisco, Utah		24,100	1	1914-17,1923-62	47,500	June	19, 1917	19.7	76,800	53
	TI.	Tributaries	s between Dolores	olores River	er and Green River	H					
1810 1820	Onion Greek near Moab, Utahgastle Creek above diversions, near Moab,	F9 B10	18.8 7.58	5,810 9,480	1951-55,1961-62 1951-55,1957-62	677 87	Aug. June	1		2,100	10.3
1825	Castle Creek near Moab, Utah	F3	53.1	6,380	1950-58	1,040		3, 1954	16.91	11,000	*1.56
1830 1840	Courthouse Wash near Moab, Utah	٠ <u>۶</u>	162	7,170	1950-55,1957 1915-17,1949-62	1,070		5, 1957 21, 1953		12,300	1 1
1845	Pack Creek at M4 Ranch, near Moab, Utah	,	15.8	,	1955-59	,				1,200	1 1
1850	Pack Creek near Moab, Utah	٠ <u>-</u>	57.4		1955-59	,		8, 1954		510	' C
1860	Indian Creek near Monticello, Utah.		4.70		1950-57	3 7		6, 1955	2.74	122	8';
TGPT	Indian creek above cottonwood creek, near Monticello, Utah,	014	7.10		79-0567	3				286	4
1870 1875	Cottonwood Creek near Monticello, Utah Indian Greek above Harts Draw, near Monticello, Utah.	F10	115 258	7,210	1950-57,1961-62 1950-57	2,100	July Aug.	10, 1953 30, 1957	9.21	2,140	*1.02 3.9

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River 1	
Green	

			_		_																						
	10		*1.68		*1,19	1	*1.06		2.1	3.6	,	15	ı	13	0.9	4.8	3.6		*1.13	1 1	0.8	ı	ı ı ¹	20°	1	1.9	20
	4,460	1.540	1,860	1,670	8,750	1 0 0 0	2,550	2,330	1,300	707	16,500	2,810	3,240	1,720	1,400	2,940	6,970	254	282	682	13,300	1	325	1,310	1	25.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00	22,200
	1 11	8 2	6.43	3,53	7.0	6.75	7.15	ດຸດ	6.74	8.56	· .	6,12	6.8	7.05	7.53		7.00 4.38	- 4	5.32	8,35	8.33 6.35	a 7.93	4.00 6.85	5.96	4.66	(b) (b)	12.3
	1954	1959	1956	1936	1918	1946	1959	1918	1959	1953	1921	1953	1918,	1953	191/	1917	1957	1943	1918	1914 1936	1938 1956 1952	1955	1958	1953	1955	1952 1956 1956 1956	1918
	29,				16,				17,		17,	15,	14,		285	19,			17,	25,	30°,	24,	17,	14,		20,13	
	June	May	June	May	June	June	June	June	June	June	June	June	June	June	May	June	June June June	June	June	May May	May June Apr.	Dec.	Apr. June	June Aug.	Apr.	Apr. Mar. Mar.	June
	3,140	ı	583		4,600	1	1,260		1,370	611		1,770	ı	1,120		α,	6,010	ı	- 88	1 1	10,100		1,170	524	ı	330 682	12,300
n	1932-62	1939-54	1955-62	1932-54	1913-52	1939-54	1955-62	1911,1916-18	1939-62	1939-62	79-CIET	1939-62	1904-6,1915-24,	1939-62	1916-17,1921-25	1905-6,1915-24,	1955-62 1955-62 1915-16,1932-62	1940-54	1915-18,1931-32 1941-42,1951-62	1913-16,1941-49 1932-39	1947-62		1916-19,1952-55 1911,1940-62	1915-17,1921-24	1940-62	1955-32 1955-62 1955-62	1895-99,1901-6, 1915-39
Green River basin	-	ı	8,880	1 1	. 1	ı	10,200	1 (10,000	9,460	ı	9,920	ı	280		8,380	8,370	1	8,970	1.1	8.160		9,250	7,820	ı	7,640	,
Green F	468	141	43	124	932	202	75.8	114	87.5	37.2	7GC	130	135	79.2	106 45.4	348	1,230	34.3	46.3	172	5,970	1 0	727 94 7	320	50.9	170 500 1.610	7,670
	-	1	A1	1 1		ı	A1		A1	A1	ı	A1	ı	A1	- A1	A1	A1 A2	ı	_ A2	1.1	- Z	!	A1	B13	1	B13 B13	
	Green River at Warren Bridge, near Daniel,	Wyo. Beaver Creek near Daniel. Wyo	Horse Creek at Sherman ranger station, Wyo	Horse Creek near Daniel, Wyo	Green River near Daniel, Wyo	Cottonwood Creek near Daniel, Wyo	Pine Creek above Fremont Lake, Wyo	Pine Creek at Fremont Lake Outlet, Wyo	Pole Creek at Induate, Myo		New Fork hiver near boulder, Myo	Boulder Creek below Boulder Lake, near	Boulder Creek near Boulder, Wyo	East Fork near Big Sandy, Wyo	East Fork at East Fork Canal, Wyo		New Fork River near Big Piney, Wyo North Piney Creek near Mason, Wyo	Middle Piney Creek below South Fork, near	Middle Finey freek near Big Piney, Wyo Is Barge Greek near La Barge Meadows ranger	La Barge Creek near Viola, WyoLa Barge Creek near La Barge, Wyo	Green River near Fontenelle, Wyo Fontenelle Greek near Herschler Ranch, near		Fontenelle Creek near Fontenelle, Wyo Big Sandy Creek at Leckie Ranch, near Big	Sandy, Wyo. B1g Sandy Creek near Farson, Wyo	Little Sandy Greek near Elkhorn, Wyo	Little Sandy Creek above Eden, Wyo Pacific Creek near Farson, Wyo Hz Sandy Creek below Eden, Wyo	Green River at Green River, Wyoe footnotes at end of table.
	1885	1890	1895	1900	1910	1915	1965	1970	1985	1995	OTOZ	2020	2025	2030	2025	2045	2050 2055	2060	2070 2080	2085	2095		2125	2135	2140	2145 2150 2160	2165 See

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		ge	Recurrence rence Interval (years)		3.9	27	16	- /2		5.8	24 41	1 1	! ! C	*1.14 *1.03	11.411	4.9	1.95 28 11	9.5 34 34	20
	discharge	Discharge	Cfs		14,600	2,530	1,200	1,100	1 1	010,1	2,450	1 1	10,400	16,000	1,830 599 4,360 6,750	(e) 15,400	1,020 153 928 19,600 1,400	140 6,820 2,040 + 4,470	5,530
	stage and		Gage height (feet)		7,42	00.4	d 7,94	80.1	4.56 a 8.17	7.69	6.74	a 13.66	a 13.47	3.98	9 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	9.45	6.05 2.98 3.74 10.60	4.39 6.64 3.90 6.86	'
	Maximum s		Date		29, 1956	, ₆	13,		9, 1957 8, 1952		77	1948	1950		7, 1957 14, 1953 6, 1952 2, 1936 3, 1936	15, 1959	19, 1948 3, 1952 4, 1952 12, 1957 16, 1962	May 9, 1957 June 14, 1921 June 12, 1918 June 6,9,1912 June 10,12,	16, 1917 June 15, 1921
nued					May	June	June			June	May					July	May June June June Apr.	May June June June	16, June
sCont1		Areal	02.33 (cfs)		12,300	1,410	919	418	1	689	1,150	1	12,400	653 257 233	436	12,300	15,000 13,000	4,710 1,320 2,460 3,330	
t gaging stations Continued		Period of	known floods (water years)	River basinContinued	1951-62	1940-62	1940-62	1940-62	1938-57	1953-62	1946-62 1919-32,1946-49	1948-62	1929-62	1945-62 1949-62 1949-62	1943-54 1944-62 1930-42 1929-61	1924-38	1943-61 1949-54 1947-55 1951-62 1943-44,1957-62	1904-6,1910-62 1913-18 1910-22,1930-62 1904-6,1909-27	
lscharges a		Mean	elevation (feet)	River basin		0/2,01	10,250	067.6	1	8,380	8,010 7,910	,	1	10,270	10,300	ı	10,200	8,840 9,680 9,090 8,600	_
Table 1 Maximum stages and discharges at		Drainage	area (sq mi)	Green I	10,000	156	53	192	821	128	298 386	3,670	14,300	56 23 33	242 52.8 73	14,900	45.9 19 110 15,100	14 604 61 206 415	
aximum s	FLood	region	hydro- logic area			걸 '	E22	EZ '	,	E2	E2 23	,	ı	E2 E6 E6	1911	1	A6 A6	- 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
Table 1M			Gaging station		Green River near Green River, Wyo	Blacks Fork near Millburne, Wyo	Fork near Robertson,	West Fork of Smith Fork near Robertson, Wyo. Smith Fork at Mountainview. Wyo		Hams Fork near Elk Creek ranger station,	Hams Fork near Frontier, Wyo Hams Fork at Diamondville, Wyo	Blacks Fork near Green River, Wyo	Green River near Linwood, Utah	Henrys Fork near Lonetree, Wyo	Henrys Fork near Burntfork, Wyo Burnt Fork near Burntfork, Wyo Burnt Fork at Burntfork, Wyo Henrys Fork at Linwood, Utah	Green River at Flaming Gorge, near Linwood,	Utan, Sheer Creek near Manila, Utah, Carter Creek near Manila, Utah, Carter Creek at mouth, near Manila, Utah, Green Haver near Greendale, Utah, Vamma River near Oak Greek, Golo	Oak Creek near Oak Creek, Golo. Yampa River at Steamboat Springs, Golo. Elk River at Ulark, Golo. Elk River at Ulark, Golo. Elk River near Trull, Colo.	
			No.		2170	2185	2200	2205	2220	2230	2235	2250	2255	2260 2265 2275	2280 2285 2290 2295	2305	2320 2330 2340 2345	2380 2395 2405 2410 2425	

2.3 2 2 33		2.3		34 46 *1.02	3. 4. 1. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.	* 1.02 * 1.02 * 1.1	40 9.5 *1.38
565 255 - 1,120 1,841	1,620 3,400 3,400 - 491 17,900	515	760 3,230 670 1,160	1,700	9,600 115 195 168	36, 500 36, 500 543 608 608	630 460 2,050
6.08 5.76 6.57 10.44	4.82 10.3 5.52 10.4	3.75	3.90 8.27 4.18 3.43	5.00	8 2 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	a 4.56
1957 1960 1962 1957 1958 1947	1957 1957 1917 1957 1957 1917	1957	1913 1920 1957 1958 1948		1923 1923 1914 1914	1952 1952 1957 1950	1948 1949 1950 1921
20, 12, 10, 12,	, 60 L L L L L L L L L L L L L L L L L L		22, 29,			78, 18, 18, 18, 18, 18, 18, 18, 18, 18, 1	
June Mar. May May May Mar. June	June June June May June May	June	Apr. May June May May June	May Apr. May	May June May June	Apr. June July May Aug.	May June Apr. May June
252 932 845 656	1,920 2,630 390 10,000	351	712 2,360 434 1,090 620	946 893	172 63	25,500	316
1954-58 1956-62 1953-62 1917,1944-47 1957-62	1954-62 1904-6,1909-27 1904-5,1916-62	1957-62	1912-20 1943-47,1951-62 1956-62 1943-51 1912-22	1911-12,1933-62 1941-44,1953-62 1948-62	1910-23,1938-62 1914-23 1954-62 1912-22	1951-56,1961 1904-6,1947-62 1939-62 1946-52 1946-62	1944-55
8,230 8,480 7,100 6,820	9,000 8,330 7,970 7,690	9,500	8,450 8,380 9,580 8,490 8,810	8,460 7,790	8,030 7,850 9,080	9,180	10,480
16 34.5 64.2 258 108	150 341 65 5,410	9.64	46 285 12.8 85.3	161 200 330	9 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	25, 400 25, 400 25, 400 25, 25, 25, 25, 25, 25, 25, 25, 25, 25,	20
A3 24.5 A4 64.2 A3 258 A4 108	A4 341 A5 65 A4 3,410	9	A4 46 A4 12.8 A4 12.8 A3			AS 3,730 AZ 120 AZ 25,400 AZ 258	
Ppsburg, Colo		A4 89 89 89 89 89 89 89 89 89 89 89 89 89	ork Little Snake River near Battle A4, Colo. Snake River near Slater, Colo A4 Zreek near Endampent, Wyo A4 Freek near Slater, Colo A4 Fork at Baxter Ranch, near Slater, A5		A A A A A A A A A A A A A A A A A A A	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	eek near Vernal, Utah A2 rnal, Utah A2

See footnotes at end of table.

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	-ge	Recurrence Interval (years)		'	0 0	12	*1.03	3.6	2.6	*1.09 34	i I	1.27	13	*1.19 41	12	7.5		48	4.7	13 *1.04
discharge	Discharge	Cfs		360	976 -	240	1,210	1,480	132	1,500	11	82	2,260	2,540	4,420	688	133	2,490	1,400	1,880
Max1mum stage and		Gage height (feet)		4.85	3.60	4.27	5.18	5.35	2,13	8 3.65 5.65	4.32	2.64		8 60.02 8 60.02	8.65	3,93	3.24	5.34	1	7.94 7.94
x1mum		υ		1949			1955	1949		1961 1953 1957			1957 1921 1958					1952		1949
, g		Date			, , ,	18,	. 25, y 21,	e 12,		. 13,			e 13,					, 7, e 26,	9	, 6, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
Di l				June			Aug.	June		June June		June		June June		May	July		June	
2100-	Ameo	Q2.33 (cfs)		570	148	158	836 1,350	1,270	125	731 406	462	118	1,630 216	1,120	2,920	391	ι 1	943	1,130	1,270
as gagaing a caroning	Device	known floods (water years)	ntinued	1939-62	1946-62	1946-62	1941-45,1354-62 1955-62 1900-4,1940-62	1937,1948-62	1945-54 1950-62	1922-23,1946-62 1950-62	1923,1946-62	1946-62	1954-60 1919-62 1954-62	1950-62	1918-62	1946-62	1946-62	1909-10,1914-62	1950-55	1945-62
20072000	W.	elevation (feet)	basinContinued	10,240	9,100	9,320	9,190	7,810	9,730	9,810	8,840	9,040	8,770	10,200	9,140	8,880	8,380	7,660	10,810	10,440
	Draftnage	area (sq mi)	Green River	48	12	12	102 118 241	. 386 . 39	7.5	78 47	19	თ	230 352 14	120 149	660 f 42	48	15	f 870 78	66	131
	Flood region	and hydro- logic area		A2	A 2	A2	A 2	A2 A2	A2	A2 A2	A 2	A2	A2 A2	A 2	A2 B2	BS	1 1	88	A2	A2 B
Table 1 maximum scages		Gaging station		Dry Fork above sinks, near Dry Fork, Utah	North Fork of Dry Fork near Dry Fork, Utah	East Fork of Dry Fork near Dry Fork, Utah	Dry Fork below spirings, near Dry Fork, ocal. Dry Fork at mouth, near Dry Fork, Utah Ashley Greek at Sign of the Maine, near	Vernal, Utah. Ashley Creek near Jensen, Utah Duchesne River at Provo River trail, near	Hanna, Utah. Hades Creek near Hanna, Utah	Duchesne River near Hanna, Utah	near Hanna, Utah. West Fork Duchesne River near Hanna, Utah	Wolf Creek above Rhodes Canyon, near Hanna,	Ucah. Duchesne River at Hanna, Utah Duchesne River near Tabiona, Utah South Fork Rock Cr'ek near Hanna, Utah	Rock Creck near Hanna, UtahRock Creek near Mountain Home, Utah.	Duchesne River at Duchesne, Utah	Currant Creek below Red Ledge Hollow, near	Water Holland, Ocan. Water Holland, Utah	Duchesne, Lake, nes	Home, Utah. Yellowstone Greek below Swift Creek, near	Altonari, Otan. Yellowstone Creek near Altonah, Utah Duchesne River at Myton, Utah
		No.		2680	2685	2690	2705	2715	2735	2740 2750	2755	2760	2770 2775 2780	2785	2795	2870	2875	2885	2915	2925

	10.10.40		~														10.~		_
17	1.23 *1.15 1.36	82	*1.28	1.27	5.0	50	l ı	50	1 1	13	58	22.0	*2.27	5.9	8.5	ı	*1.65	7.3	31.31
2,300	3,320 204	1,780	2,750	8,790	481	+ 3,150	3,230	3,000	102	6,370	23 + 8,160	43,600	11,000	414	1,070	121	1,120	9,500	14,200
5.10	2.20	4.42	5.40	4.63	и в в в в в в в	4.05	8.2	7.07	4.56	4.60	4.08	14.99	17.73 9.40 8.8	1 0	3.62	3.50	4.53	9.74	11.60 (b)
1949	1951 1944 1951	1949	1922	1952	1957	1912	19061	1957	1958	1921	1929	1952	1962 1961 1955	1952	1952	1944	1952	1961	1962
	10 10 10	18,	50,	29,	. 4. δ	36,	17,	30,	11,	, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,	9, 12,	11, 27,		30,	14,	6	13,	, , , ,	13,
June 18,	May June May	June	June	Apr. June	July	May	Jan.	June	May	June	May July Feb	June Mar.	February Aug. 25, Aug. 25,	May	June May	May	May 5, Sept.13,	Sept	Sent.
1,450	178 1,520 278	1,030	1,130	549	385	1,910	ı	1,570	1	3,890	4,600	51,000	1,000	259	593	,	2,200	4,910	2,420
1946-55	1925-27,1930-62 1950-62	1946-55	1902-3,1909,	1951-58 1951-58 1943-62	1957-62	1912,1915,1920,	1906,1914-15,	1952-62 1952-62 1956-62	1958-62	1901,1910-62	1904-5,1923-62	1948-55,1957-62 1951-55,1958-62	1947-55,1961-62 1952-55,1958-62 1947-55,1961-62	1931-32,1941-62	1932-33,1939-62	1942-47	1940-62	1909-10,1946-62	1949-62
10,960	10,300 10,200 9,720	10,700	10,370	9,240	10,800	9,550	ı	9,990		086,8	1	7,650	7,080	9,960	8,710		8,360 8,160	6,490	5,050
132	9.5 181 22	06	115	5,920	21.4	254	156	170	52	762	4,020	35,900	890 30 231	16.4	29	23	53 455	1,500	200
AZ	A2 A2 A2	A2	A2	A2 B	A3	A3		A3		A3	4	c13	C1.3 	327	B7	38	88	· 麗	5 6 6
Unta River above Clover Creek, near Neola,	Utan. Clover Creek near Neola, Utah Uinta River near Neola, Utah Farm Creek near Whiterocks, Utah	Whiterocks River above Paradise Creek, near	Whiterocks River near Whiterocks, Utah	Dry Gulch near Neola, Utah	White River below Trapper's Lake, Colo	White River at Buford, Colo	South Fork White River near Buford, Colo	South Fork White River at Buford, Colo Big Beaver Creek near Buford, Colo	Coal Creek near Meeker, Colo	White River near Meeker, Colo Piceance Creek at Rio Blanco, Colo	White River near Watson, Utah	Green Hiver near Ouray, Utah	Utan. Willow Creek near Ouray, Utah	Myton, Utah. Gooseberry Creek near Scofield, Utah	Price River above Scoffeld Reservoir, near	Scoffeld, Utah. North Fork White River near Soldier Summit,	White River near Soldier Summit, Utah Price River near Heiner, Utah	Price Alver near neiper, ucan	Green favor as dreen flyer, Utah. Browns Wash near Green River, Utah
0962	2965 2970 2980	2982	2995	3010 3020	3024	3030	3035	3040 3041	3043	3045	3065	3070 3075	3080 3085 3090	3100	3105	3120	3125	3145	3155

See footnotes at end of table.

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			ur- ce rval		7.8	12.	1 00	07.1	26.0 26.0		@ 10	ı	G.		*1.04		g .		7.6	ĺ	۰ ۷	16	٥. ١	*1.45 14
	a)	arge	Recurrence Interval								15		49				18							
	discharge	Discharge	Cfs		2,500	1,750 2,870 1,660		1,630	12,000		3,340 700	2,890	35,000		9,900		7,390		105,600		3,610	3,450	350	4,650
	stage and		Gage height (feet)			11.3	80.08	6.52	12.7		8.25 4.00	9,63	28.1		9.24		7.54		17.20		4.26	6.6	2.18	10.25
	Maximum		40		1930	1913 1913 1941	1957	1951	1909		1952 1955	1921	1957		1952		1953		1952 1957		1952			1955
	Ma		Date		ι	วู้อำดำท			•		16,	κ,	4		7,		31,		12,		Aug. 21, July 3.	ist,	, 6	25,
penu					Aug	Sept.	Aug.	Aug	Sept		May Aug.	Aug.	Nov.		Aug.		July		June		Aug.	Augu	Aug.	July Aug.
sCont1		Areal	Q2.33 (cfs)		1,400	1,410	031	0011	3,320		891 239	ı	7,960		1,910		2,350		75,000		363	۲,		718
at gaging stations Continued		Period of	known floods (water years)	tinued	1909-62	1911-21 1910-27,1932-62 1947-58	09-0401 20-0101	1911-14,1948-58	1909-18,1946-62	basin	1909-14,1949-62 1951-62	1951-62	1948-62		1950-62	u	1950-62	stem	1947-58	ıstn	1951-55	1910-12,1943-55	1951-55,1958-62	1951-55 1950-55
discharges a		Mean	elevation (feet)	basinContinued	000,6	9,860	a	200	1 1	River	8,850 8,870	ı	6,600	Wash basin	5,400	Canyon basin	060,9	River main	ı	e River basin	8.890			8,320
		Drainage		Green River	188	352 205 261	1	210	1,690	Dirty Devil	105 50	440	4,360	North	140	White (276	Colorado F	76,600	Escalante	90	310	1.9	175
ximum st	Flood	region	hydro- logic area		B7	B7	5	à '	00		63	,	60		60		60		ı		888	85	88	888
Table 1 Maximum stages and			daging station		Huntington Creek near Huntington, Utah	Huntington Creek near Castle Dale, Utah Cottonwood Creek near Crangeville, Utah Cottonwood Creek near Castle Dale. Utah	IItah		San Karael Kiver near Castle Dale, Utah		reek near Emery, Utah	Muddy Creek below Ivie Creek, near Emery,	Dirty Devil River near Hite, Utah		North Wash near Hite, Utah		White Canyon near Hite, Utah		Colorado River at Hite, Utah		North Creek near Escalante, Utah.		creek near boulder, Utan ek near Boulder, Utah	Boulder Creek near Boulder, Utah Escalante River at mouth, near Escalante, Utah.
			No.		3180	3185 3245 3250	1367	3275	3280 3285		3305 3315	3325	3335		3340		3345		3350		3355	3375	3385	3390 3395

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3399	East Fork San Juan River above Sand Creek,	E1.1	64.1	10,100	1957-62	872	June	6, 1957	6.32	012,1	5,1
3400	near Pagosa Springs, Colo. East Fork San Juan River near Pagosa	E11	86.9	9,910	1935-62	1,080	May	12, 1941	4.84	2,070	16
3405	Springs, Colo. West Fork San Juan River above Borns Lake,	E11	41.2	11,300	1937-53	828	June	18, 1949	5.24	1,290	6.9
3415	near Pagosa Springs, Colo. West Fork San Juan River near Pagosa	E11	87.9	10,400	1935-60	1,270		8, 1949	6.45	,	
3420	agosa Springs,	ı	23.0	1	1937 -49	ı				2,330	13
3425	San Juan River at Pagosa Springs, Colo	国品	298	9,540	1911-62	2,790				25,000	*3.58
3435	Rico Blanco near ragosa Springs, Colo	E11	23.3	9,310	1935-52	281		3, 1941	3.21	475	9.6
3440	Navajo River at Banded Peak Ranch near	ei o	8.69	10,400	1937 -62	725				1,340	14
3443	Unromo, Colo. Navajo River above Chromo, Colo	EIO	96.4	10,000	1957-62	831		7, 1957		1,340	8.5
3455	Little Navajo River at Chromo, Colo	Elo	21.9	9,260	1936-52	189				299	23
3460 3475	Navajo River at Edith, Colo	E10	172	9,170	1935-62 1937-41,1946-54	949	Apr.	22, 1942 23, 1942 18, 1949	7.52	2,840	*1.20 8.4
3485	Pagosa Springs, Colo. Williams Creek near Bridge ranger station,	E11	43.7	066,6	1937-41,1946-49	622	May	11, 1941	3.68	940	7.0
3490	near Pagosa Springs, Colo.	Ell	53.4	10,400	1937-41,1946-49	832	May	19, 1948	6.11	944	2.9
3495	near ragosa Springs, colo.	Ell	371	9.560	1940-62	3,360		6, 1957		6,870	50
3505	San Juan River at Rosa, N. Mex		1,990	, I	1924-62	8,200		_		25,000	36
3508	Vaqueros Canyon near Gobernador, N. Mex	B22	900		1956-62	700	July	7, 1957	7.88	1,740	26
0.700		3	3.	77,000	CO-0#61,1#-0061	3		-		2	2 1
3535	Los Pinos River at Tenacio. Colo	CG E13	270	10,800	1928-62	2,360				13,800	*1.31
3550		E11	58	6,960	1951-62	258				0 0	
3555	San Juan River near Archuleta, N. Mex	1 1	3,260	1.1	1955-62	10,400	July	19, 1957 27, 1957 5, 1911	11.00	18,900	ο. ο.
25.67	Worker Draw near Dicompteld N May	600	۲		1928-54					25,000	16_
3570	San Juan River at Bloomfield, N. Mex	i .	5,410	1	1912-62	13,300				80,000	*1.04
3572	Gallegos Canyon tributary near Nageezi,	B22	. 04		1952-62	1		_		239	ı
3575	Animas River at Howardsville, Colo	Bll	55.9	11,800	1936-62	1,260			4.36	1,980	5.3
3585	Cement Creek near Silverton, Colo	BII	13.5	11,800	1936-37,1947-49	376	July	18, 1936	, 	470	ъ. 2
3591		BII	33.8	10,900	1957-61	647				1,400	12.0
3595	Animas River above Tacoma, Colo	B11	348	11,100	1920-28.1940-62	5,040		8, 1949		9,500	0 E
3615		113	269	10,100	1909-62	6,720				25,000	28
See	footnotes at end of table.										

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 Table 1 Maximum stages and di
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	Table 1M	aximum s	1Maximum stages and di	discharges at	at gaging stationsContinued	sConti	nued				
		Flood					W	Maximum	stage and	discharges	_Ω
;		region	Drainage	Mean	Period of	Areal				Discharge	rge
0	daging station	hydro- logic area	area (sq m1)	elevation (feet)	known floods (water years)	Q2.33 (cfs)	Date	e e	Gage height (feet)	Cfs	Recur- rence Interval (years)
			San Juan Riv	River basin-	basinContinued						
3620	Lightner Creek near Durango, ColoRlorida River near Hermosa, Colo.	113	66	8,180	1928-49	1.090	Oct. 25		5.90	1,850	33
3630	Durango,	C113	96		1901-3,1911,	1,230	May 9, June 28,	1962	8.79	3,200	15 21
3632	Florida River at Bondad, Colo	1	221	1	1957-62	,	June 7		1	1,430	•
3635 3645	Animas River near Gedar Hill, N. Mex	G11 C11	1,090	8,510	1935-62 1909-62	6,030	Sept.12, June 19, Oct. 6,		5.32 11.45 d 16.5	13,100 (b)	8.1
3650	San Juan River at Farmington, N. Mex	' [7,240	יטיר	1913-62 1909,1912-62 1905-6	16,000	June 29, June 29,	1927	10.2	25,000 68,000	35 36
3660 3665	Cherry Creek near despens, Outcomer La Plata River at Colorado-New Mexico State	1 1	331 331	001	1920-62	7	Aug. 25, Aug. 24,	7 7 7	11.05	1,480	3 ' 1
3670	line. La Plata River at La Plata, N. Mex	CII	351	١	1904,1909,	ı	Oct. 6,	1904	,	8,000	ı
3678.	3678.6 Chusca Wash near Mexican Springs, N. Mex	618	8.7		1937 -38, 1940 -42,	ı	19	1953	5.28	4,400	ı
3678.	3678.8 Catron Wash near Mexican Springs, N. Mex	CI.8	26.9	i	1957-40,1942,	1,300	Aug. 26,	1939	ı	4,710	52
3680	San Juan River at Shiprock, N. Mex		12,900	1	1912,1928-62	21,300	_	1911	22	(a)	' (
3685 3690 3695	West Mancos River near Mancos, Colo East Mancos River near Mancos, Colo Middle Mancos River near Mancos, Colo	010	42.1 11.1	9,610	1938-53 1937-51 1937-51	123	May 13, May 8, May 8,		4.55 2.67	1,080 1,080 642	*1.17
3700	Mancos River near Mancos, Colo		7.3	1	1932-38	ı	d)	1949	2.85	1.1	1 1
3710	Tawaoc,	113	550	7,170	1921-43,1951-62	1,950	-1		7.30	5,300	13
3715 3720 3795	McElmo Creek near Cortez, Colo	C11 -	233 350 23.000	6,450	1927-29,1941-43, 1951-54 1951-62 1915-17,1927-62	922	Sept. 9, Aug. 29, Sept. 10.	, 1927 , 1951 , 1927	7.05	1,700	*1.83 6.0
			Colorado	River	main stem						
3800	Colorado River at Lees Ferry, Ariz	-	107,900	,	1884-1962	88,000	July 7	7, 1884	d 31.5	300,000	*1.67
			Paria	River basin	sin						
3815	Paria River near Cannonville, Utah	60	220	068,89	6,890 1951-55,1959-62	1,860	Aug. 12, 1959	1959	14.32	7,500	36

16	*1.07	1	- 09	1 04.	*1.67	ı	13	12	50.11	42	23	*2,53	*2.45	3.5		*1.67		*1.37		50	*1.04		37	7.4	27.
16,100	16,000	1,100	3,570	6,250	25,000	1,360	9,820	30,000	19,800	25,300	16,400		8 120,000	7,440		300,000		4,400		7,000	13,500	1,450	1,400	4,200	22,000
16.3	17.1	4.13	1 1	0.00	12.0	1	13.2	10.4	18.2	19.8	21.5	d18.1	0.74	15.6		,		15.0		11.0	13,29	5.00	10.25	10.02	2 2
1925	1940	1945	1929	1952	1919		1959		1952	1952		1929	923	954		1884		1936		1938			1961	1955	
Oct. 5,	July 25,	Aug. 13,	Aug. 9, 1 July 28, 1	Aug. 8, Jan. 18,	Dec. 5,	184 184	Aug. 6,	12,	n. 18,	June 19,	m. 18,	Apr. 4,	pt.19,	Sept.23, 1		July 8,		g. 19,		r. 3,	Sept.17, Sept.28,	Nov. 14, Oct. 6,	Sept.17, Aug. 24,	Aug. 24,	
5,360 00	1,660 Ju	- Au	1,180 Jr		5,610 De	1	3,610 Au		2,200 3	3,020 10			000 Se	5,400 Se		88,000 Jr		720 Aug.		1,570 Mar	2,900 Se		362 Se 1,520 Au	2,050 Au	
-	F																	_							
1924-62	1940-62	1940-61	1940-62 1929-33,1940-62	1941-54	1916-20,1929-62	1949,1955-62	1940-62	1940-49	1948-62	1916-20,1929-62	1948-62	1929-62	1870-1960	1954-62	stem	1884-1962	basin	1924-62		1913-14,1926-62	1910-62	1909-30,1939-61	1955-62	1951-56	1930-62
6,140		,	1.1	1		ı	1 1	,		,	ı	1	1 1		River main s	ı	Creek	-	River basin	'	1.1	ŀ		1,1	•
1,570 6,140	747	3,680	2,580	87	8,100	14.5	558	2,760	275	0,010	321	209	21,200	26,590	1 -	137,800	Bright Angel	98.4	Virgin F	350	934 146	97	338	540	5,090
60	D14		11	D15	CTO) To	217	C17	710	015	710	510	1 5	015				212		CLS	C15	,	C15 C15	C15	ာပ
Paria River at Lees Ferry, Ariz	Little Colorado River above Lyman Reservoir,	near St. Johns, Ariz.	nunt, Ariz. Zuni River at mouth near Hunt, Ariz. Little Colorado River near Hunt, Ariz	Show Low Creek at Show Low, Artz	Silver Creek near Snowlinke, Ariz Little Colorado River at Woodruff, Ariz	Puerco Kiver tributary near Fort Wingate,	Puerco River at Gallup, N. Mex.	Puerco River near Adamana, Ariz	Little Colorado Kiver at Holbrook, Ariz		Clear Creek below Willow Creek, near Winglow, Artz.		Little Colorado River at Grand Falls, Ariz.	Mochkopi Wash near Camery Ariz.		Colorado River near Grand Canyon, Ariz		Bright Angel Creek near Grand Canyon, Ariz		North Fork Virgin River near Springdale,	Varein River at Virgin, Utah	Santa Clara River near Central, Utah	Moody Wash near Veyo, Utah	Santa Clara, Utan. Santa Clara River at St. George, Utah Wingir Biyar near St George IIIeh	Virgin River at Littlefield, Ariz
2820	3840	3865	3870	3925	3945	3954	3955	3965	3975	3980	3985	3990	4010	4015		4025		4030		4055	4060	4090	4095	4130	4150

See footnotes at end of table.

Table 1. -- Max1mum stages and discharges at gaging stations -- Continued

			Recur- rence interval (years)		۱ ۵	0.1	30 *1.33		4.2				30 32	*1,82	ļ	*1.04	*1.02 *1.12	*1.10	*1.04	*1.06	' '	13.	*1.44 10	17	K.
	discharge	Discharge	Cfs Int		(q)		12,000		1,400		g 400,000		1,400 33,600 86,000	g 200,000		25,400	40,000	39,500	28,200	1,830			143,450		7.260
	stage and		dage height (feet)		6.6	7.10	20.36		-		1500.5		5.75 12.95 39.6			17.19	31.0	13.64	20.12	4.20	4.29	10.74	10.1	7.62	8.7
,	Max1mum s		Date		27,	, Š	Nov. 6, 1960 Aug. 11, 1941		Aug. 21, 1957		g 1862		1941 1951 1939	(j) Feb. 21, 1891		Sept.29, 1941	Sept.29, 1941 Sept.29, 1941	Sept.29, 1941	Sept.29, 1941 March 1960	Aug. 20, 1955			3,3		Sept.10. 1958
sContin	1	Areal	02.33 (cfs)		1	200	000,1		770		,		4,600	12,200			6,700	4,220	6,500	192		_	11,100		064 6
discharges at gaging stationsContinued		Period of	known floods (water years)	ntinued	1913-17,1945-62	1951-60	1950-62	basin	1957-62	stem	1857-1962	basin	1940-44 1939-62 1939-62	1891-1946	n	1928-62	1929-55	1939-49	1911-17,1928-62 1958-62	1954-62	1955-62	1928-62	1891-1962	1944-62	1944-62
scharges a		Mean	elevation (feet)	basinContinued	, ,			Wash b	-	River main	'	River	, , ,	,	River basin	-		,		,	1	١,		ı	,
		Drainage	area (sq mi)	Virgin River	g 40	(a)	h4,170 h4,230	Las Vagas	h1,518	Colorado	172,300	Bill Williams	127 1,520 4,730	5,140	Gila	1,864	2,829	3,360	4,010,	32	68	1.653	2,766	149	277
aximum st	Flood	region	hydro- logic area		D23	D23	D23		D23				016 016 016	016				,	_ D14	D14	' }	C14	D17	C1.7	7.5
Table 1 Maximum stages and			Gaging station		Muddy River near Moapa, Nev.	Meadow Valley Wash near Callente, Nev	Muddy River near Glendale, Nev		Las Vagas Wash near Henderson, Nev		Colorado River near Topock, Ariz		Date Creek near Congress, Ariz. Santa Maria River near Alamo, Ariz. Bill Williams River near Alamo, Ariz.	Bill Williams River at Planet, Ariz		Gila River near Gila, N. Mex.	dila River hear Hed Rock, N. Mex		dia River near Clifton, Ariz	11ne, near Luna, N. Mex.	Tularosa River near Aragon, N. Mex.	Tutarosa niver near neserve, N. Mex	San Francisco River at Clifton, Ariz	Morenci, Ariz. Willow Greek near Double Circle Ranch, near	Morenci, Ariz.
			No.		4160	4185	4190 4195		4197		4240		4250 4255 4260	4265		4305	4315 4320	4380	4420 4426.5	4426.6	4426.9	4440	4445	4460	4465

13,000	*1.06	434 - 3,360 - 5,350 6.1	508	\$3,000 5,290 -	2,860		150,000 ×1.36		98,000 +2,60		*1.64		56	42,900 *1.63	11,900 11 4,520 16	12,000 25		17,500 19 51 600		544	9,000	
-	14.0 100	14.0	1	19.0		111	0 60	28.0.0	21.9	- 1	21.5 8 90 - 8 90	6.3 20	0 =	13.07	9.33						7.85	
Feb. 10, 1932	Jan. 19, 1916	Sept. 5, 1944 Aug. 7, 1921 July 21, 1923 July 22, 1955	Aug. 16, 1958	Aug. 9, 1931 Sept.30, 1941 Oct. 4, 1953	July 19, 1955	July 19, 1955 Sept.28, 1941	14, 1941 28, 1905	28, 1926	28, 1926		28 28		8, 1930	Aug. 5, 1954 m Aug. 19, 1954	Jan. 2, 1941 July 30, 1950	Aug. 6, 1955 Aug. 31, 1935	800	19,	22,		30,	Aug. 5, 1955
3,850 Fe	11,000 JE	2,850 Jr	- Aı	4,500	- بر		13,000 NG	6,820	8,440			9,000		2,920 Au	2,200 Je		3,980	5,500	_	E E	2,340 De	-
1932-62	1914-62	1923-62 1920-25 1923,1931-41 1939-62	1939-62	1931-62 1940-53,1957-62 1954-62	1954-62	1954-62	1916,1930-62	1926-62	1950-41,1950-52	1954-62	1926-62	1919-21,1931-41	1	1917-20,1939,	1940-62	1930-62	1930-62	1940-47,1952-62	1940,1943-62	1951-59	1940-45	79-29-67
1	,	1111	1	111	,	111		, ,	ı	1 1	1 1	1 1		ı	t I	1	1	1 1	,	1 1	1	•
613	7,896		1.19	2,192 10,459 8.61	3.47	1.07	12,886	741	612,1	57.7	2,939	542		144	20,615	532	508	1,662	n 27.0	3.19	221	44.8
(017	ı	0100 0100 0100 0100	613	C19 C21	C21	C21 C21	F18	021 021	C21	CSI	C21 C23	C21		D18	C20	020	C27	020	2 1	0250	020	CSI
Eagle Creek above pumping plant, near	Morenci, Ariz. Gila River at head of Safford Valley, near	A SS SS A	S	Ariz. San Sinon River near Solomon, Ariz Gila River at Safford, Ariz Walnut Gulch above Emerald Gulch, near	₹		San Carlos River near Peridot, Ariz Gila River below Coolidge Dam, Ariz	GILA MIVET AT WINKELMAN, AFIZ	San Pedro River at Charleston, Ariz	Walnut Gulch near Tombstone, Ariz	San Pedro River near Redington, Ariz			Queen Creek at Whitlow dam site, near	Superior, Ariz. Gila River near Laveen, Ariz	Santa Cruz River near Nogales, Ariz	Sonoita Creek near Patagonia, Ariz	Santa Cruz River at Continental, Ariz	Tucson Arroyo at Vine Avenue, Tucson, Ariz	Sabino Creek near Mount Lemmon, Ariz	Rillito Creek near Wrightstown, Ariz	Rincon Creek near Tucson, Ariz
4470	4485	4519 4545 4560 4566.8	4568.2	4570 4585 4611	4611.7	4611.8 4622	4685 4695	4705	4710	4711.9	4720	4730	À	4785	4795	4805	4815	4820	4830	4833	4845	4850

Table 1. -- Maximum stages and discharges at gaging stations -- Continued

G20 3.503 - 1,782 - 1,782 - 1,782 - 14.8 F15 560 F17 119 F17 11,232 F17 1,232 F17 38.8 F17 38.8 F17 652 F17 620 F17 620 F17 620 F17 630 F17 63	G11a Hver G20 3,503 1,782 F15 8,581 F15 8,581 F17 11,227 F17 1,227 F17 2,237 F17 6,520.3 F17 6,520.3 F17 6,520.3 F17 6,520.3 F17 6,520.3 F17 6,520.3	Alia Hyer	Arrea C20 3,503	Grea G11a Hyer	G11a Hver C20	G11a Hyer G20 3,503 G20 G2	All a All a All a All a	G11a Hver C20
basinContinued - 1940-47,1950-62 - 1940-46,1948-62 - 1954-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62 - 1958-62	194C	-Continu 1940 1940	194C	194C	194C	1940 1940 1912	194C	1940-47,1950 1940-47,1950 1956-62 1958-62 1958-62 1958-62 1958-62 1956-62 1955-60 1955-60 1955-60 1955-60 1955-62 1955-62 1955-61 1955-62
			111 11111 111 1 11 11		111 11111 111 1 11 111 1 11			
40 ชนซืออี 0ar	40 82 82 82 82 82 82 82 82 82 82 82 82 82							
119 1,232 1,232 66 38.8 20.3 632 237	119 1,232 1,232 58.8 20.3 632 237 57.0	119 1,232 1,232 28.8 38.8 20.3 632 237 57.0	119 1,232 266 66 632 20.3 57.0 57.0 57.0 57.0 57.0 57.0 64.9 64.306 64.306 64.306	119 1,232 66 66 22 237 237 57.0 33.4 2,36 4,306 675	119 1,232 666 66 20.3 20.3 20.3 57.0 57.0 84.9 4,306 675 675 675 675	11.9 1,232. 66. 38.8 38.8 20.3 27.0 57.0 2,849 4,506 675 57.0 48.9 49.4 49.4	11.9 1.232 56.8 58.8 20.5 27.0 57.0 57.0 57.0 67.5	1119 1,232 668 6632 20.3 20.3 23.4 213.4 4.306 675 675 575 575 575 575 675 675 675 67
	Nort Apache, Ariz Atver near McNary, Ariz Iver near Fort Apache, ort Apache, Ariz Fort Apache, Ariz Ve Corduroy Creek, near		<u></u>					
H17 Ar1z F17 F17 Sreek, near F17	Ariz F17 Aris F17 Sreek, near F17 Le Greek, near F17	Ariz F17 Ariz F17 Sreek, near F17 Le Creek, near F17 A Ariz F17 22 Show Low, F17	Ariz R17 Ariz F17 Steek, near F17 Le Greek, near F17 A Ariz F17 Ariz F17 Ariz F17 Ariz F17 Ariz F17 Ariz F17 Ariz F17 Ariz F17 Ariz F18 Ariz F18	Ariz. R17 Ariz. PR7 Treek, near P17 Le Creek, near R17 A Ariz. R17 Ariz. R17 Ariz. R17 Ariz. R17 Ariz. R17 Ariz. R18 Ariz. R18 Ariz. R18 Ariz. R18 Ariz. R18 Ariz. R18 Ariz. R18	Ariz R17 Ariz P27 Treek, near R17 Le Creek, near R17 ar Show Low, R17 Ariz R17 F18 F18 F18 F18 F18 F18 F18 F	P17 P17 P17 P18 P1	THE THE THE THE THE THE THE THE THE THE	11. 12. 12. 12. 12. 13. 14. 15. 15. 15. 15. 15. 15. 15. 15. 15. 15
	e Forestdale Creek, near F17	. E.7.	. H.7 . H.7 . H.7 . H.8 . L.8	H17 H17 H17 H18 H18 H18 H18	717 717 717 717 718 718 718 718	777 777 777 778 778 718 718 718	(t, 73 27 27 27 27 27 27 27 27 27 27 27 27 27	tr

RR. datum,

H.8	*1.16	1 1	92		,		4.6
1,700	27,000	60	8 200,000 8 200,000		250,000		2,060
1	5.13	6,1	Mar. 5, 1958 m 9.95 Jan. 22, 1916 Feb. 15, 1932 m 16.75		Jan. 22, 1916 34.0		14.93
1941	1945	1943	1916		1916		1955 1959
16,	6,65	3,	12,00		22,		, 27,
Apr.	Aug.	Aug	Jan Feb		Jan.		Aug.
2,100	5,200 Aug. 29, 1945	3,400 February 1891	750		ı		3,150 Aug. 7, 1955 July 27, 1959
1940-46	1938,1946-62	1939-47	1904-62	n stem	1967-1962	basin	1916-20,1930-62
	,	1.1	,	Colorado River main stem	1	Whitewater Draw basin	ı
78.7	417	774 49,650	58,100	Colorado	242,900	Whitews	1,023
018	018	1 1	'		-		613
Hassayampa River near Wagoner, Ariz	Hassayampa River at Box dam site, near	Wickenburg, Ariz. Hassayampa River near Morristown, Ariz Gila River below Gillespie Dam, Ariz	Gila River near Dome, Ariz		Colorado River at Yuma, Ariz		5375 Whitewater Draw near Douglas, Ariz C19
5145	5155	5165 5195	5205		5210		5375

i Elevation above mean sea level, Atlantic and Pacific RR. da Jocurred prior to 1395 (probably Rebruary 1937).

K Drainge area below Goolidge Dam.

Maximum since regulation began in 1929.

n Subsequently reduced by diversion structures.

P Maximum recorded; flood of Jan. 28, 1915, 18 known to have exceeded this by an unknown amount.

G Belleved to have occurred on this date.

r Probably exceeded 150,000 cfs. Present datum.
Discharge not determined, greater than that of Aug. 3, 1936.
Does not include 170 ag mi above Strawberry Reservoir.
Batimated.
Boss not include noncontributing area. to that of the 50-year flood, * Ratio of peak discharge to a Maximum daily.

Backwater from ice.

Not determined.

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Table 2..-Peak discharge at miscellaneous sites and outstanding floods at short-term gaging stations

		Table 7. Teak discilaise at illisteriaieous sites and outstand ironas at		SHOTT-LET'IN BABANB BLALLONS		
	Flood			Peak d	Peak discharge	
No.	region and hydro- logic area	Stream and place of determination	Contributing drainage area (sq m1)	Date	Cfs	Cfs per sq mi
		Williams Fork basin				
н	A6	Bobtail Greek (head of Williams Fork) at mouth, 2 miles west of Jones Pass,	7.0	June 20, 1907 a	88 8	126
01 20 4 4	A6 A6		2.56 4.5 (b)	June 20, 1907 a June 20, 1907 a June 20, 1907 a	a 75 a 335 a 1,070	29.3
ល	A6	South Pork Williams Fork & mile above mouth, 20 miles southeast of	(q)	June 20, 1907 a	a 548	
9	A6		(a)	June 20, 1907 a	a 1,720	1
		1				
7	A6	Indian Wash 12 miles above mouth in Grand Junction, Colo	14	Aug. 3, 1961	808	57.7
		Tributaries between Utah-Colorado State line and I	Dolores River			
യത	22	Harley Dome Wash 1.3 miles southwest of Harley Dome, Utah. Cisco Wash 1 mile west of Cisco, Utah.	3.1 29	Aug. 19, 1959 Sept. 9, 1961	634 3,220	204
		Tributaries between Dolores River and Green	River			
유규	F3 F10	Salt Wash 3 miles east of Thompson, Utah. Kane Springs Canyon 7 miles northwest of La Sal Junction, and 15 miles south of Mosb, Utah.	3.9	Aug. 19, 1959 Aug. 18, 1961	1,380	354
		Green River basin				
12	BZ	Deadman Wash at bridge on U.S. Highway 30, 2.8 miles east of Point of Rocks,	152	Aug. 13, 1963	1,230	8.09
13 14	B2 B3	Bitter Cre k at bridge on dirt road 0.2 mile south of Point of Rocks, Wyo Salt Wells Creek tributary at oulvert on State Highway 430, 19 miles south-	759	Mar. 27, 1962 Aug. 13, 1959	1,650	2.17 162
15	B2	east of nock Springs, wyo. Salt Wells Creek tributary at culvert on State Highway 450, 8 miles south-	9.8	July 31, 1959	2,290	992
16	E6	east of Rock Springs, wyo. Green River tributary No. 2 at onlyert on State Highway 530, 4.8 miles	13.0	July 15, 1959	3,360	258
17	A 2		64	Sept.23, 1961	737	115
18 19 20	A22 A22	Cow Wash on U.S. Highway 40, 7.8 miles east of Jensen, Utah	3.9 5.6 .12	Sept. 9, 1961 July 12, 1962 Aug. 22, 1960	830 147 52	213 26.2 433
27	A2	Farm Creek tributary near Hanna, Utah. Wagstaff Draw near Pabiona, Utah.	5.8	Sept. 2, 1960 Sept. 2, 1960	4,300	531 114

44.4 41.2	79.7	159 40.3 289	534	845	163	377	209	75.0 249	539		45.8	12.1 157 192	900	167		105	9.09		157	503	27.1	33.5
488	542 230	860 2,500 1,040	5,340	3,720	19,500	1,470	1,190	1,320	1.460		2,600	3,500	7,500	3,500		5,560	3,820		3,450	1,560	812	4,620
Sept. 2, 1960 Mar. 23, 1962	Aug. 31, 1961 Feb. 13, 1962	Aug. 2, 1961 Sept. 9, 1961 Aug. 12, 1959	Sept.21, 1962	Sept.21, 1962	Sept.21, 1962	Aug. 19, 1959	. 4.	Aug. 25, 1961 Aug. 25, 1959	1 6		Sept.17, 1961	Aug. 2, 1961 Aug. 3, 1961 Aug. 12, 1959	Sept. 8, 1961	Sept.21, 1962		Aug. 2, 1959	Aug. 3, 1961		Aug. 6, 1963	July 26, 1957	Aug. 29, 1957	1955
11,	15.8	3. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.	10	4.4	120	9.8	5.7	17.6	6.1		56.7	80.6	12.5	20.9		53	63		22	3.1	3.0	138
Benson Creek on State Highway 35, 7.5 miles northwest of Duchesne, Utah Street River tributary 1 mile south of U.S. Highway 40, 4 miles west of Darbeause	, E &	Miler Creek on State Highway 10, 5.5 miles south of Price, Utah. Miler Creek on State Highway 10, 5.5 miles south of Price, Utah. Coleman Wash tributary on U.S. Highway 6, 8 miles northwest of Woodside,	Saleratus Wash tributary on U.S. Highway 6, 10 miles south of Woodside,	Saleratis Wash tributary No. 2 on U.S. Highway 6, 12 miles south of Wood-side. Hah.	Saleratus Wash above Cottonwood Wash & mile southwest of U.S. Highway 6,	Browns Wash tributary 32 miles east of Green River, Utah	Buckhorn Draw tributary 14.5 miles east of Castle Dale, Utah	Sids Draw 24 miles southeast of Castle Dale, Utah	Tanksville, Utah. Creacest Mash & Mile West of Creacest Jinetion. With	7	Sulphur Greek at west entrance to Capitol Reef National Monument 1 mile	Pleasant Zrack to the above crossing on State Highway 24 at Notom, Utah Neilson Wash & Miles east of Calville and 9 miles west of Hanksville, Utah Calville Wash near Calville. Utah	Farley Canyon on State Highway 95, 1 mile above mouth and 12 miles east of	Fry Canyon 3 miles above mouth and 22 miles southeast of Hite, Utah	Escalante River basin	Upper Valley Creek 2.2 miles above mouth and 7 miles west of Escalante,	Deer Creek 3} miles above mouth and 6.4 miles east of Boulder, Utah	San Juan River basin	Gobernador Canyon 0.2 mile south of State Highway 17, 4 miles southwest of	Manzanator, N. Manzanator Manzanator State Highway 17,	San Juan River tributary 0.4 mile above mouth and 3.3 miles east of Kirt-	11 - San Juan Hiver tributary near Waterflow, N. Mex
A2 B8	888	888	60	65	60	8	36 C8	888	3 5		83	8228	65	63		88	88		B13	B13	B13	e foot
23	25	23	30	31	32	33	35	37	3 8	3	04	41 42 54	44	45		46	47		48	49	20	51. Se

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FLood	Table ZFeak discharge at miscellaheous sites and outstanding iloods at		short-term gaging stationsContinued Peak discha	ntinued discharge	
region and hydro- logic area	Stream and place of determination	Contributing drainage area (sq m1)	Date	Cfs	Cfs per sq mi
1	San Juan River basinContinued				
	Figuredo Wash near Mexican Springs, N. Mex. Chaco River tributary at Naschitti, N. Mex. Arches Canyon near Blanding, Utah. Lime Wash 1½ miles below Left Fork Lime Creek, 3 miles above mouth, and 5 miles northeast of Mexican Hat, Utah.	72 8.8 45 32	Aug. 19, 1958 Aug. 6, 1959 Aug. 3, 1961 Aug. 21, 1962	3,510 2,490 1,980 5,700	48.8 283 44.0 178
	Parla River basin				
1	Paria River = mile east of Cannonville, and 4 miles southeast of Tropic,	96	Aug. 3, 1961	4,830	50.3
	Henricalle Creek at 1rrigation diversion dam, 1 mile east of Henricville, Utah.	34	Aug. 4, 1961	7,360	216
1	Little Colorado River basin				
1	١.	260	Aug. 25, 1959	8,380	15.0
	West of Salt Lake, N. Mex. Galestera Canyon tributary near Black Rock, N. Mex. Puerco River tributary No. 1 near Coolidge, N. Mex. Puerco Hyer tributary No. 2 near Coolidge, N. Mex. Foster Canyon near Coolidge, N. Mex.	19 6. 6. 7.91	August 1959 Aug. 6, 1959 Aug. 6, 1959	368 877 722 722	19.4
	Smith Canyon near Coolidge, N Mex. Puerco Hiver tributary No. 5 mar Goolidge, N. Mex. Four Mile Canyon near Coolidge, N. Mex.	1001	Aug. 6, 1959 Prior to 1956	534 5,250 690	1,029
	Puerco River tributary No. 4 at Wingate, N. Mex. Puerco River tributary No. 5 near Gallup, N. Mex. Puerco River tributary No. 6 near Gallup, N. Mex. Puerco River tributary No. 7 at Defiance, N. Mex.	3.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5	September 1958 July 31, 1956 July 31, 1956 Aug. 17, 1958	1,590 1,230 4,940 3,810	442 2,365 549 97.7
1	Kanab Creek basin				
	Hog Canyon near Kanab, Utah	18.5	July 4, 1961	6,580	356
	Red Lake basin				
l l	Truxton Canyon near Kingman, Ariz.	417	July or August	49,000	118
	Virgin River basin				
	Spring Canyon Wash at Glendale, Utah. Bash Fork Virgin Hiver near Yoderville, Utah. Bast Fork Virgin River near Mount Carmel, Utah. East Fork Virgin River near Mount Carmel, Utah. Mineria Gulich 5# miles west of Mount Carmel Junction and 6 miles southwest of Orderville, Utah. Blacks Canyon near Springdale, Utah.	98.7 37. 162 7.6	Aug. 25, 1961 Aug. 8, 1961 Aug. 25, 1961 Aug. 8, 1961 Sept.17, 1961 Aug. 8, 1961	1,530 2,130 8,190 5,550 1,680	382 21.6 221 34.2 221 1,140
	_	_			

401 54.8 76.2 20.6	,		39.0		10.5		44.4		12.8 37.5 17.8		88.9		142 892		19.6 58.0 58.0 1,526.1 1,530 1,530 1,530 1,530 1,530 1,530 1,530 1,60 1,60 1,60 1,60 1,60 1,70 1,60 1,70 1,70 1,70 1,70 1,70 1,70 1,70 1,7
8,350 5,040 5,180 5,210	3,570		30,000		15,000		12,000		4,300 a 100,000 77,000		40,000		5,000		2,180 2,180 1,570 1,570 1,570 2,500 3,110 3,110 3,200 1,3,200
Sept.17, 1961 Aug. 19, 1959 Aug. 10, 1961 Nov. 6, 1960	Aug. 30, 1961		Sept.12, 1939		Sept. 6, 1939		Sept.25, 1939		Mar. 14, 1941 Sept. 6, 1939 Sept. 6, 1939		Sept. 5, 1939		Sept. 5, 1939 Sept. 5, 1939		Aug. 1, 1962 August 1965 Aug. 19, 1959 July 19, 1959 Aug. 19, 1959 Aug. 19, 1959 September 1958 Aug. 10, 1954 July-August1955 Sept. 26, 1948 July 1954 Aug. 27, 1959 Aug. 26, 1959 Aug. 26, 1959 Aug. 26, 1959 Aug. 26, 1959
20.8 92 68 68 253	-		770		1,430		270		335 2,670 4,330		450		35.3 41.5		111 228 228 1.0 3.1 3.1 3.1 4.40 5.8 6.64 114.6 114.6 115.7 115.7 115.7
Coalpits Wash near Rockville, Utah. La Verkin Creek near Toquerville, Utah. Akkinville Wash near St. George, Utah. California Wash near Glendale, Nev.	Duck Creek at Whitney, Nev	Piute Wash basin	Piute Wash at box canyon 8.5 miles northwest of Needles, Calif	Sacramento Wash basin	Sacramento Wash at mouth, near Topock, Ariz	Chemehuevi Wash basin	Chemehuevi Wash at Needles-Vidal highway near Needles, Calif	Bill Williams River basin	Kirkland Creek at Yava, Ariz. Big Sandy Hiver below Burro Creek, at Signal, Ariz. Bill Williams River at confluence of Big Sandy and Santa Maria Rivers, near Alamo, Ariz.	Arroyo Seco basin	Arroyo Seco at mouth, 21 miles upstream from Picacho, Calif	Tributaries to All-American Canal	Wash at All-American Canal, near Yuma, Ariz. Ploacho Wash at All-American Canal, near Yuma, Ariz.	Gila River basin	D14 Sapillo Creek near Pinos Altos, N. Nex. D14 Copperas Canyon near Pinos Altos, N. Nex. D14 Copperas Canyon near Pinos Altos, N. Nex. D14 Duck Creek Cributary in Cliff, N. Nex. D14 Duck Creek tributary in Cliff, N. Nex. D14 Saliz Canyon tributary near Reserve, N. Nex. Cl4 Canyon tributary near Reserve, N. Nex. Cl4 Canyon tributary near Serve, N. Nex. Steins Creek tributary near Steins, N. Nex. Steins Creek tributary near Steins, N. Nex. Cl9 San Simon Kiver near Bowle, Ariz. C21 Neah above dunters Ranch 12½ miles north of Pomerene, Ariz. C21 Neah above dunters Ranch 12½ miles north of Pomerene, Ariz. C21 Neah above dunters Ranch 12½ miles north of Pomerene. C22 San San San Creek near Florence Junction, Ariz. Durham Wash near Oracle Junction, Ariz. C23 San Carra River tributary near Ariz. C24 San Carra River tributary near Continental, Ariz. C25 Santa Cruz River tributary near Continental, Ariz. C26 Santa Cruz River tributary near Continental, Ariz. C27 Santa Cruz River tributary near Continental, Ariz.
C15 C15 C15 D23	D23		١.		1				D16 D16		-		٠.		
78 79 80 81	82		83		84		92		86 88		68		90		99999999999999999999999999999999999999

		Table 2Peak discharge at miscellaneous sites and outstanding floods at	short-term gag	short-term gaging stations Continued	tnued	
	Flood		:	Peak d	Peak discharge	
No.	region and hydro- logic area	Stream and place of determination	Contributing drainage area (sq mi)	Date	Cfs	Cfs per sq mi
		Gila River basinContinued				-
110	020	River tributary at Co	3.08	36	1,040	338
111	020	River tributary near Tucson,	5.31	Sept.26, 1962	2,740	516
112	020		1.26	Sept.26, 1962	940	746
113	020	Santa Cruz River tributary near Tucson, Ariz	3.98	Sept.26, 1962	3,980	1,000
114	020	ø	457	Aug. 11, 1958	38,000	83.2
115	020		2.17	Sept.26, 1962	1,400	202
116	,	ash near Marana,	90.8	Sept.13, 1962	5,700	707
117	,	Brawley Wash tributary near Three Points, Ariz	11.9	Sept.26, 1962	13,800	1,160
118	•	Brawley Wash tributary near Tucson, Ariz	800.	Sept.26, 1962	69	8,630
119	١	Brawley Wash near Tucson, Ariz	1,077	9	38,800	36.0
120	,	Los Robles Wash near Marana, Ariz	1,350	Sept.26, 1962	32,600	24.1
121	,	Greens Canal near Eloy, Ariz	(e)	Sept.26, 1962	24,100	•
122	,	Greens Wash at Chulchi, Ariz	(a)		17,200	,
123	,		(e)		f 15,800	•
124	,		629		14,000	22.3
125	1		185	20,	2,830	5.50
126	710		600	23	g h 75	7.58
127	710	N	290.	29,	g h 75	1.150
128	F1.8	بکرا	295	31, 1	8,180	27.7
129	818	Copper Hill Wash (Copper Gulch) at Globe, Ariz.	1.6	17, 1	3,200	2,000
130	F18	c below Copper Hill W	33.4	_	13,200	395
131	F1.8	Pinal Creek at Globe, Ariz	34.4	29, 1	8,130	536
132	F18	ü	18.2	20, 1	2,720	149
133	1	Salt River at Roosevelt, Ariz	g 5,830	Feb. 23, 1891	g 150,000	25.7
134	F18	Willow Greek near Prescott, Ariz	22	_	1,300	59.1
135	F18	Verde River near Clarkdale, Ariz	3,530	21,	20,600	14.3
136	FJ 8	Beaver Creek at Camp Verde, Ariz	433	22,	h 17,000	39.3
137	138	East Verde River near Payson, Ariz.	272	Aug. 22, 1963	9,950	36.6
7.00	F	GEST VETGE AIVET DEST UNITED AFIZ.) TC	Aug. 22, 1965	11,400	0.00
601	FIG		200	27.0	100,600	2,00
7. 0.		צמות עות של שנומסטם השו" אנוק	12,300	7.47	300,000	0.00
141	'		121	٠,	8,570	8.07
7.47	' '	near Phoenix, Ariz	202.	August 1921	000,62	czt -
145	FIR		g 1,460	٠,,	000, cot	71.9
144	1	New River near Black Canyon, Ariz	7.00	9,	4,620	52.6
145		Withters Wash near Tonopan, Arizz	47. 8. 4.	Sept. 5, 1962	9// 6	16.2
147			24.55	Sept. 5, 1962	480	4.35
148	,		1.810	July 23, 1961	14.500	0.0
149	1		51,600	February 1891	250,000	4.84
		,				

150 151 152 153	1111	San Juan Wash near Sells, Ariz. All Wolina Wash near Sells, Ariz. Sells Wash tributary at Sells, Ariz. Sells Wash at Sells, Ariz. Wilcox Playa basin.	10 (1) 140	Sept.26, 1962 Sept.26, 1962 Sept.26, 1962 Sept.26, 1962	1,600 430 1,650 17,200	160
- 12.5	0.50	Mant Beat and American Theory Andre	-	1001 7:1: 21 1001	000	. 65

201		Sells Wash ac Sells, Alle	0.41	2001 607 1dec	11,5000	150
		Wilcox Playa basin				
154	619	West Turkey Creek near Light, Ariz	19	July 31, 1921	J 990	52.1
		Animas Valley				
155	613	Animas Creek near Rodeo, N. Mex	248	Sept.13, 1958	1,030	4.15
126	019	Animas Creek tributary near Rodeo, N. Mex	4.78	_	459	94.1
157	1	Lordsburg Draw tributary No. 1 near Separ, N. Mex	47.6	September 1958	2,310	48.6
158	,	Lordsburg Draw tributary No. 2 near Separ, N. Mex	43.3	September 1958	4,730	109
129	'	Wood Canyon tributary near Lordsburg, N. Mex	•	September 1958	432	•
160	1	Peterson Canyon near Lordsburg, N. Mex	1	September 1958	603	1
191	,	Peterson Canyon tributary near Lordsburg, N. Mex	ı	September 1958	218	1
٩	a Estimated	J. Company of the Com				

a Estimated.

Description of determined.

Description of the control of the contr

105. Colorado River below Baker Gulch, near Grand Lake, Colo.

Location.--Lat 40°19'33", long 105°51'22", in sec.12, T.4 N., R.76 W., on left bank 500 ft downstream from Baker Gulch, 1 mile upstream from Bowen Gulch, and 5 miles northwest of town of Grand Lake.

Drainage area .-- 53.0 sq mi.

Gage .-- Recording. Altitude of gage is 8,750 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 720 cfs.

Remarks .-- Transmountain diversion above station materially affects peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak	atomea	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	June 13, 1953	6.30	630	1958	May 29, 1958	6.83	820
1954	May 19, 1954	4.56	165	1959	June 10, 1959	5.49	377
1955	June 15, 1955	5.02	2 55	1960	June 17, 1960	5.52	386
1956	May 22, 1956	5.99	527	1961	June 20, 1961	6.09	578
1957	June 30, 1957	7.19	976	1962	June 15, 1962	6.10	582

110. Colorado River near Grand Lake, Colo. (Published as "Grand River (North Fork)" 1904 and as "North Fork of Grand River" 1905-18)

Location. -- Lat 40°13'08", long 105°51'25", in NELSW 1/4 sec.13, T.3 N., R.76 W., on left bank 200 ft downstream from bridge on U.S. Highway 34, 400 ft upstream from high-water line of Shadow Mountain Reservoir, and 3 miles southwest of town of Grand Lake.

Drainage area. -- 103 sq mi.

Gage.--Nonrecording prior to June 15, 1934; recording thereafter. June 15, 1934, to Sept. 26, 1944, at site 1,100 ft downstream at different datum. Altitude of gage is 8,380 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended to 1,840 cfs by logarithmic plotting.

Remarks. -- Diversions above station for irrigation of about 2,200 acres. Grand River ditch, a transmountain diversion above station, exports water to South Platt River basin. Diversions affect flood peaks significantly. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 9, 1905	6.30	1,300	1944	June 11, 1944	4.42	403
		1	}	1945	June 25, 1945	5.38	452
1906	June 13, 1906	6.00	1,090	1		i	
1907	July 4, 1907	6.10	1,250	1946	June 8, 1946	5.24	470
1908	June 22, 1908	5.15	500	1947	June 22, 1947	5.79	694
1909	June 20, 1909	6.60	1,620	1948	May 23, 1948	5.58	568
	1	l		1949	June 21, 1949	6.08	956
1913	June 1, 1913	5.50	740	1950	June 18, 1950	5.24	418
1914	June 1, 1914	6.80	1,700				
1915	June 19, 1915	5.2	565	1951	June 20, 1951	5.68	689
	1	Į		1952	June 11, 1952	6.56	1,290
1916	June 16, 1916	5.37	666	1953	June 14, 1953	5.69	630
1917	June 23, 1917	6.7	1,620	1954	May 20, 1954	4.89	292
1918	June 15, 1918	7.0	1,840	1955	May 16, 1955	4.89	267
1935	June 16, 1935	5.18	914	1956	Mar. 31, 1956	a6.27	_
	[1	May 22, 1956	_ `	702
1936	June 1, 1936	4.50	666	1957	June 30, 1957	6.50	1,310
1937	May 16, 1937	3.80	405	1958	May 29, 1958	6.09	942
1938	June 22, 1938	4.69	776	1959	June 10, 1959	5.51	515
1939	June 1, 1939	4.12	557	1960	June 5, 1960	5.62	564
1940	June 3, 1940	3.79	406]			
	·			1961	June 20, 1961	5.67	617
1941	May 13, 1941	4.82	602	1962	Feb. 14, 1962	a5.98	-
1942	June 12, 1942	4.44	469		June 15, 1962	-	747
1943	June 2, 1943	4.6S	553	1			
a Ba	ckwater from ice				·		

a Backwater from ice.

115. Little Columbine Creek above Shadow Mountain Reservoir, at Grand Lake, Colo.

Location. -- Lat 40°15'00", long 105°49'50", in sec.6, T.3 N., R.75 W., on left bank 300 ft east of U.S. Highway 34, a quarter of a mile upstream from Shadow Mountain Reservoir, and three-quarters of a mile west of town of Grand Lake.

Drainage area. -- 1.3 sq mi, approximately.

Gage.--Recording gage and Parshall flume. Concrete control at same site at datum 0.56 ft lower prior to Oct. 28, 1950. Altitude of gage is 8,389 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 14 cfs.

Remarks. -- No diversion above station. Peaks are principally from snowmelt.

Base for partial-duration series, 10 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1950	June 3, 1950	0.87	a 9.8	1953	May 20, 1953 July 11, 1953	1.35 1.51	11 13
1951	May 5, 1951	1.38	11		Aug. 2, 1953	1.28	ii
1952	Oct. 8, 1951 May 3, 1952 May 11, 1952	1.36 2.21 1.66	12 34 15	1954	Nov. 6, 1953 Aug. 5, 1954	1.55 1.39	14 12
	June 3, 1952	1.40	12	1955	June 14, 1955	.89	6.3

a Maximum for period Apr. 12 to Sept. 30, 1950.

GRAND LAKE OUTLET BASIN

125. North Inlet at Grand Lake, Colo. (Published as North Inlet to Grand Lake at Grand Lake 1905-12)

Location.--Lat 40°15'10", long 105°48'50", in $NE_{\frac{1}{4}}^1$ sec.5, T.3 N., R.75 W., 300 ft downstream from Tonahutu Creek and 1,600 ft upstream from Grand Lake.

Drainage area .-- 46.6 sq mi.

Gage.--Nonrecording prior to October 1947 at site 1,300 ft downstream at different datum; recording thereafter. Datum of gage is 8,434.48 ft above mean sea level (Bureau of Reclamation bench mark).

 $\frac{Stage-discharge\ relation.--Defined\ by\ current-meter\ measurements\ below\ 800\ cfs}{and\ extended\ to\ 1,110\ cfs\ by\ logarithmic\ plotting.}$

Remarks.--Transmountain diversion above station by Eureka ditch; diversion does not significantly affect the peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 350 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	June 12, 13, 14, 1906	4.00	644	1951	May 23, 1951 May 29, 1951	4.14 5.19	350 642
	1 22, 2000	ļ]]]	June 18, 1951	5.71	824
1911	June 15, 1911	4.30	775	li	June 26, 1951	5.00	585
	_ ,]]	July 4, 1951		483
1912	June 11, 1912	3.95	602	11			
				1952	June 7, 1952		1,110
1948	May 21, 1948	5.25	665		June 19, 1952	5.12	626
	June 3, 1948	4.87	551	[i	ĺ
	June 11, 1948	4.22	375	1953	May 28, 1953		635
	1	j		<u> </u>	June 2, 1953	4.49	467
1949	May 30, 1949	4.62	425		June 13, 1953		800
	June 6, 1949	4.39	371		June 19, 1953	5.07	611
	June 13, 1949	5.34	618))]
	June 18, 1949	6.18	960	1954	May 19, 1954	4.13	348
	June 27, 1949	4.73	496	il			
	ł	ł	1	1955	June 9, 1955		405
1950	June 6, 1950	5.06	579		June 14, 1955		440
	June 16, 1950	5.61	758	H	June 22, 1955	4.87	601

135. East Inlet near Grand Lake, Colo.

Location.--Lat 40°14'20", long 105°48'00", in $NW_{\overline{u}}^{\frac{1}{4}}$ sec.9, T.3 N., R.75 W., 1,200 ft upstream from mouth and 1 mile southeast of town of Grand Lake.

Drainage area .-- 27.1 sq mi.

Gage.--Recording. Datum of gage is 8,370.49 ft above mean se^o level (Bureau of Reclamation bench mark).

 $\frac{Stage-discharge\ relation.--Defined\ by\ current-meter\ measurements\ below\ 550\ cfs}{and\ extended\ to\ 710\ cfs\ by\ logarithmic\ plotting.}$

Remarks. -- No diversion above station. Peaks are principally from snowmelt.

Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 22, 1948 June 3, 1948 June 11, 1948	3.19 3.10 2.59	452 420 265	1951	June 21, 1951 June 26, 1951 July 5, 1951	3.37 3.18 2.94	573 497 409
1949	May 30, 1949 June 6, 1949 June 14, 1949 June 17, 1949 June 28, 1949 July 7, 1949	2.72 2.52 3.34 3.90 2.98 3.04	302 246 504 710 382 401	1952 1953	May 5, 1952 June 7, 1952 June 20, 1952 July 6, 1952 May 28, 1953 June 13, 1953	2.36 3.80 3.26 2.35 3.06 3.59	225 685 496 222 466 656
1950	May 23, 1950 June 7, 1950 June 16, 1950 June 24, 1950	2.42 2.94 3.64 2.46	220 369 609 230	1954	May 21, 1954 June 6, 1954 June 19, 1954	2.38 2.15 2.32	260 201 246
1951	May 23, 1951 May 28, 1951	2.35 3.17	230 493	1955	June 14, 1955 June 23, 1955	2.68 3.04	326 448

140. Grand Lake Outlet at Grand Lake, Colo.

Location .-- Lat 40°14'40", long 105°49'30", in sec.6, T.3 N., F.75 W., at foot-bridge at outlet of Grand Lake, half a mile south of Grand Lake Post Office.

Drainage area .-- 76.7 sq mi.

Gage. -- Nonrecording. Altitude of gage is 8,369 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,050 cfs.

Remarks. -- No diversion above station during period of record. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 9, 1905	4.50	1,170	1909	June 20, 1909	4.75	1,320
1906 1907 1908	June 16, 1906 July 1, 1907 June 23, 1908	4.35 4.25 3.70	1,140 1,080 710	1911 1912 1913	June 15, 1911 June 28, 1912 May 31, 1913	4.00 4.30 4.00	870 1,150 880

150. Colorado River below Shadow Mountain Reservoir, Colo. (Published as "below Shadow Mountain Dam" prior to October 1950)

Location. -- Lat 40°12'24", long 105°50'18", in NW1 sec.19, T.3 N., R.75 W., on right bank a quarter of a mile downstream from Shadow Mountain Dam, 0.7 mile upstream from Pole Creek, and 3½ miles south of town of Grand Lake.

Drainage area. -- 190 sq mi.

Gage.--Recording. Datum of gage is 8,320.00 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks. -- Flow regulated by Shadow Mountain Reservoir. Only annual peaks are shown.

Peak s	tages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 24, 1948	4.48	1,400	1954	May 20, 1954	3.81	1,210
1949	June 20, 1949	4.81	1,800	1955	June 22, 1955	4.80	2,290
1950	Nov. 15, 1949	4.58	2,190				
				1956	May 22, 1956	4.63	2,030
1951	May 18, 1951	5.18	2,940	1957	July 3, 1957	5.78	3,600
1952	June 11, 1952	5.51	3,210	1958	May 28, 1958	5.42	3,230
1953	June 13, 1953	4.69	2,110	1959	June 8, 1959	4.00	1,420

COLUMBINE CREEK BASIN

155. Columbine Creek above Lake Granby, near Grand Lake, Colo. (Formerly published as Columbine Creek above Granby Reservoir, near Grand Lake)

Location. --Lat 40°11'20", long 105°49'00", in $SW_{ij}^{\frac{1}{4}}$ sec.29, T.3 N., R.75 W., on right bank a quarter of a mile upstream from high-water line of Lake Granby and 5 miles south of town of Grand Lake.

Drainage area. -- 7.3 sq mi, approximately.

 $\underline{\text{Gage.--}}$ Recording gage and concrete control. Datum of gage is 8,282.08 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation. -- Defined by current-meter measurements below 110 cfs.

Remarks. -- No regulation or diversion above station. Peaks are principally from snowmelt. Base for partial-duration series, 80 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 16, 1950	2.16	a 93	1953	June 13, 1953 June 19, 1953	2.15 2.08	90 83
1951	May 28, 1951	2.07	85	1			
	June 19, 1951 June 25, 1951	2.15 2.06	92 84	1954	May 19, 1954	1.39	38
		1		1955	June 22, 1955	1.53	54
1952	June 3, 1952	2.31	100				
	June 10, 1952	2.58	130				

a Maximum for period April to September.

165. Arapaho Creek at Monarch Lake Outlet, Colo.

Location. --Lat 40°06'45", long 105°44'57", in $SW_{\bar{u}}^{\frac{1}{4}}SW_{\bar{u}}^{\frac{1}{4}}$ sec.24, T.2 N., R.75 W., on right bank a quarter of a mile downstream from Monarch Lake Outlet and 10 miles east of Granby.

Drainage area .-- 47.1 sq mi.

Gage .-- Recording. Altitude of gage is 8,310 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 960 cfs.

Remarks. -- Natural regulation by Monarch Lake (surface area, 200 acres). Peaks are principally from snowmelt. Base for partial-duration series, 630 cfs.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1945	June 14, 1945 June 25, 1945	3.68 3.81	638 727	1956	May 23, 1956 June 1, 1956	4.30 4.01	990 826			
1946	June 7, 1946	4.04	888	1957	June 6, 1957 June 13, 1957	4.41 3.84	1,060 732			
1947	May 11, 1947 June 9, 1947 June 20, 1947	4.09 4.30 4.28	731 970 956		June 21, 1957 June 29, 1957	3.97 4.76	903 1,290			
1948	May 21, 1948	3.82	723	1958	May 21, 1958 May 29, 1958 June 7, 1958	3.95 4.04 3.86	830 884 780			
1949	June 13, 1949 June 18, 1949	3.92 4.19	854 1,040	1959	June 7, 1959 June 15, 1959	3.83 3.91	726 770			
1950	June 16, 1950	3.82	781		June 19, 1959	3.93	782			
1951	June 18, 1951 June 27, 1951	4.38 3.68	1,040 650	1960	June 4, 1960 June 18, 1960	3.89 3.88	760 754			
1952	June 11, 1952 June 30, 1952	4.71 3.74	1,300 707	1961	May 30, 1961 June 2, 1961 June 10, 1961	3.63 3.65 3.64	665 675 670			
1953	May 29, 1953 June 13, 1953	3.97 4.31	808 946		June 20, 1961	3.62	660			
1954	May 21, 1954	3.03	392	1962	July 1, 1962	3.96	854			
1955	June 23, 1955	3.51	565							

170. Arapaho Creek below Monarch Lake, Colo.

Location.--Lat 40°07'50", long 105°46'30", in $SE_{\pi}^{\frac{1}{4}}$ sec.15, T.2 N., R.75 W., 700 ft downstream from Roaring Fork, $2\frac{1}{2}$ miles downstream from outlet of Monarch Lake, and 10 miles east of Granby.

Drainage area. -- 59 sq mi, approximately.

2.53

3 50

4.31

1937

1938

June 26, 1937

June 4, 1938 June 22, 1938

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 8,244.30 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 900 cfs.

Remarks.--A few small diversions for irrigation above station and natural regulation by Monarch Lake (surface area, 200 acres). Peaks are principally from snowmelt. Base for partial-duration series, 550 cfs.

Peak stages and discharges Gage Gage Discharge Water Water Discharge Date height Date height year (cfs) year (cfs) (feet) (feet) 1935 June 16, 1935 4.13 1,310 May 31, 1939 June 6, 1939 2.73 1939 628 615 1936 May 29, 1936 3.18 887

567

994

1,380

1940

1941

June 2, 1940 June 15, 1940

14, 1941

25, 1941

May

May

2.74

2.44

2.75

2.55

686

554

664

576

Peak stages and discharges of Arapaho Creek below Monarch Lake, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1941	June 19, 1941	2.89	726	1943	June 10, 1943 June 22, 1943	2.73 2.82	629 677
1942	June 7, 1942 June 18, 1942	3.66 3.08	1,060 796	1944	May 31, 1944 June 22, 1944	2.50	550 769
1943	May 30, 1943	2.53	548		oune 22, 1544	3.02	105

COLORADO RIVER MAIN STEM

195. Colorado River near Granby, Colo. (Published as "Grand River" 1908 to 1911)

Location.--Lat 40°07'15", long 105°54'00", in $SW_{\overline{4}}^{1}NW_{\overline{4}}^{1}$ sec.22, T.2 N., R.76 W., on right bank 0.3 mile upstream from bridge on U.S. Highway 34, 1.3 miles upstream from Willow Creek, and 3.2 miles northeast of Granby.

Drainage area .-- 322 sq mi.

Gage.--Nonrecording prior to June 11, 1934; recording thereafter. June 10, 1908, to Sept. 30, 1911, at site 300 ft upstream at different datum. Datum of gage is 7,960 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 2,900 cfs.

Bank-full stage .-- 6 ft.

Remarks.--Transmountain diversions above station by Eureka and Grand River ditches and Alva B. Adams tunnel. Flow completely regulated by Granby Reservoir since Sept. 13, 1949. Several small diversions above station for irrigation. Some flood peaks prior to Sept. 13, 1949, are significantly affected by diversion. Base for partial-duration series, 1,500 cfs. Only annual peaks are shown prior to 1934 and subsequent to 1949.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Pischarge (cfs)
1908 1909	June 17,23,1908 June 20, 1909	4.00 5.50	1,480 4,100	1942	June 18, 1942	3.75	2,000
1910	June 1, 1910	4.50	2,320	1943	June 2, 1943 June 10, 1943	3.62 3.58	1,850 1,810
1911	June 16, 1911	4.80	2,800		June 23, 1943	3.64	1,870
1934	May 12, 1934	3.20	1,240	1944	June 1, 1944 June 11, 1944	3.38 3.68	1,640 1,950
1935	June 16, 1935 June 21, 1935	4.71 4.05	3,370 2,450	1945	June 15, 1945 June 25, 1945	3.60 3.97	1,830 2,240
1936	May 6, 1936 June 1, 1936 June 9, 1936	3.45 4.34 3.82	1,580 2,640 1,980	1946	June 8, 1946 June 18, 1946	3.82 3.66	2,070 1,870
1937	May 17, 1937 May 29, 1937 June 26, 1937	3.40 3.44 3.47	1,510 1,550 1,590	1947	May 12, 1947 June 10, 1947 June 21, 1947	3.84 4.37 4.18	2,030 2,830 2,580
1938	May 17, 1938 June 4, 1938	3.33 4.35	1,510 2,640	1948	May 22, 1948	4.08	2,390
	June 22, 1938	4.66	3,010	1949	May 31, 1949 June 18, 1949	3.49 4.41	1,590 2,960
1939	May 23, 1939 June 1, 1939	3.50 3.87	1,680 2,070		July 8, 1949	3.53	1,880
1940	June 2, 1940	3,68	1,860	1950	July 23, 1950	1.04	59
1941	May 14, 1941 May 26, 1941	3.82 3.57	2,070 1,800	1951 1952 1953	June 14, 1951 June 23, 1952 June 19, 1953	1.15 2.10 1.27	80 435 112
	June 19, 1941	3.70	1,940	1962	July 3, 1962	3.44	1,420
1942	June 12, 1942	3.98	2,260	1302	July 3, 1962	3.44	1,420

200. Willow Creek near Granby, Colo.

Location. --Lat 40°11', long 106°00', in NW_{h}^{1} sec.34, T.3 N., R.77 W., on right bank 10 ft upstream from bridge on State Highway 125, 100 ft downstream from Gold Run Creek and 7 miles northwest of Granby.

Drainage area .-- 105 sq mi.

Gage.-Nonrecording prior to June 3, 1935; recording thereafter. June 3, 1935, to Sept. 30, 1937, at datum 1.52 ft higher. Oct. 1, 1937, to Sept. 20, 1946, and May 20 to Sept. 30, 1948, at datum 0.95 ft higher. Sept. 21, 1946, to May 19, 1948, at datum 1.70 ft lower. Datum of gage is 8,233.88 ft above mean sea level, unadjusted.

Stage-discharge relation. -- Defined by current-meter measurements below 870 cfs.

Remarks. -- Diversions above station for irrigation of hay meadows; flood peaks are probably not significantly affected. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 27, 1935 June 15, 1935	2,55 2,76	490 578	1945	May 27, 1945	3.23	440
1936	May 6, 1936	3.53	638	1946	June 8, 1946	2.40	228
1000	May 16, 1936	3.70	680	1947	May 8, 1947 June 9, 1947	4.28 3.51	656 334
1937	May 16, 1937	2.62	415		June 21, 1947	3.57	358
1938	May 1, 1938 May 16, 1938	3.48 4.49	500	1948	Apr. 20, 1948 May 20, 1948	3.36	315 641
	May 30, 1938	4.49	811 801			3.95	
1939	May 20, 1939	3.69	563	1949	May 16, 1949 May 31, 1949 June 13, 1949	4.79 4.84 4.37	607 622 486
1940	May 13, 1940	2.81	303	1950	,	4.05	396
1941	May 13, 1941	4.08	680	1950	May 23, 1950 June 2, 1950 June 7, 1950	4.05 4.06 4.07	399 402
1942	May 27, 1942	4.05	655	1951	May 29, 1951	4,96	688
1943	May 2, 1943 June 2, 1943	3.04 3.50	380 506	1931	June 21, 1951	3.99	403
1944	May 31, 1944 June 10, 1944	2.93 2.90	342 334	1952	May 5, 1952 May 15, 1952 June 8, 1952	5.20 4.94 5.44	800 70 4 9 56
1945	May 13, 1945 May 19, 1945	3.21 3.26	435 449	1953	May 29, 1953	3.72	539

205. Willow Creek above Willow Creek Reservoir, Colo.

Location.--Lat 40°09'20", long 105°58'48", in $NE_{\overline{u}}^1NE_{\overline{u}}^1$ sec.11, T.2 N., R.77 W., on right bank 0.2 mile upstream from high-water line of Willow Creek Reservoir at elevation 8,130 ft, $2\frac{1}{2}$ miles downstream from Trail Creek, and $5\frac{1}{2}$ miles northwest of Granby.

Drainage area .-- 128 sq mi.

 $\frac{\text{Gage.--Recording}}{8,135.07}$ ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Remarks.--Diversions above station for irrigation of hay meadows do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 300 cfs.

Peak stages and discharges of Willow Creek above Willow Creek Reservoir, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 12, 1954	-	230	1958	May 13, 1958	-	400
		Í		Ï	May 23, 1958	-	880
1955	May 16, 1955	3.76	295		May 27, 1958	5,34	682
1956	May 10, 1956	4.36	633	1959	May 13, 1959	3.79	334
	May 23, 1956	4.77	1,010		,,		
	,	1	Í Í	1960	May 14, 1960	-	a630
1957	May 10, 1957	4.02	556	1	, ,		
	June 7, 1957	4.93	1,280	1			

a Maximum daily.

FRASER RIVER BASIN

240. Fraser River near Winter Park, Colo. (Published as "near Arrow" 1910-23 and as "near West Portal" 1924-39)

Location.--Lat 39°54'00", long 105°46'35", in NE $\frac{1}{4}$ sec.4, T.2 S., R.75 W., 100 ft downstream from bridge on U.S. Highway 40, $1\frac{1}{2}$ miles northwest of Winter Park, 2 miles upstream from Vasquez Creek, and $2\frac{1}{2}$ miles downstream from point of diversion for Moffat water tunnel.

Drainage area .-- 27.6 sq mi.

Gage. -- Nonrecording Sept. 23, 1910, to May 12, 1916, at trail bridge 1 mile upstream at different datum; recording thereafter. Datum of gage is 8,906.23 ft above mean sea level (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 460 cfs.

Bankfull stage . - - 41 ft.

Remarks.--Transmountain diversions above station to Berthoud Pass ditch and since June 1936 to Moffat water tunnel. Diversion probably did not affect flood peaks substantially prior to 1936. Peaks are principally from snowmelt. Base for partial-duration series, 200 cfs.

Water year	Date	Cage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Itscharge (cfs)
1911	July 5, 1911	2.9	304	1930	May 30, 1930	1.96	271
1914	June 3, 1914	2,82	514	3.0-3	June 12, 1930	2.18	331
1916	May 10, 1916	-	260	1931	June 4, 1931	1.91	202
1917	June 23, 1917	2,15	346	1932	June 15, 1932	1.67	192
1918	June 13, 1918	2.9	820	1933	June 11, 1933 July 7, 1933	2.40 1.87	376 250
1919	May 28, 1919	1.4	168	1934	May 29, 1934	1.55	172
1920	May 31, 1920 June 10, 1920	1.86 1.9	308 322	1935	June 16, 1935	2.32	375
1921	June 11, 1921	2.5	525	1936	May 30, 1936	1.94	279
1922	May 28, 1922	2.2	230	1937	May 20, 1937	1.38	150
1322	June 13, 1922	2.03	336	1 9 38	June 9, 1938	1.39	152
1923	June 16, 1923	2.33	442	1939	June 5, 1939	1.44	167
1924	June 14, 1924	2.33	442	1940	Apr. 19, 1940	.71	35
1925	May 31, 1925 June 15, 1925	1.80 1.98	218 254	1941	Oct. 16, 1940	.85	54
1926	June 6, 1926	2.36	383	1942	June 18, 1942	2.10	326
1927	June 28, 1927	1.83	235	1943	July 6, 1943	1.48	157
	-			1944	June 15, 1944	1.79	229
1928	May 30, 1928 June 29, 1928	2.24 1.99	350 287	1945	June 25, 1945	1.38	132
1929	May 25, 1929 June 8, 1929	2.15 2.04	322 292	1947	June 20, 1947	2.03	278

Peak stages and discharges of Fraser River near Winter Park, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	June 4, 1948	2.10	295	1956	June 1, 1956	1.25	149
1949	June 17, 1949	2.18	359	1957	June 28, 1957	2.50	535
1950	May 3, 1950	.96	46	1958	Nov. 22, 1957 June 5, 1958	al.97 1.74	313
1951	June 20, 1951	2.17	318		•		
1952	June 6, 1952	2.60	471	1959	June 15, 1959	1.41	178
1953	June 14, 1953	1.55	237	1960	Dec. 1, 1959 June 17, 1960	al.85 1.68	252
1954	Nov. 9, 1953 Dec. 7, 1953	.51 a1.28	18 -	1961	Dec. 2, 1960 June 21, 1961	al.72 1.28	_ 146
1955	June 27, 1955	.68	36	1962	Nov. 8, 1961 June 15, 1962	a2.32 1.25	_ 170
1956	Nov. 17, 1955	a1.45			10, 1502	1,20	110

a Backwater from ice.

250. Vasquez Creek near Winter Park, Colo. (Published as Vasquez Creek near West Portal 1935-39)

Location.--Lat 39°55'13", long 105°47'05", in $NE_{\frac{1}{4}}^{\frac{1}{4}}NW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.33, T.1 S., R.75 W., on right bank 40 ft downstream from bridge on U.S. Highway 40, a quarter of a mile upstream from mouth, $2\frac{1}{2}$ miles northwest of Winter Park, $2\frac{1}{2}$ miles southeast of Fraser, and $4\frac{1}{2}$ miles downstream from Moffat water tunnel diversion.

Drainage area. -- 27.8 sq mi.

Gage.--Recording. Datum of gage is 8,768.48 ft above mean sea level, unadjusted.

Stage-discharge relation. -- Defined by current-meter measurements below 350 cfs.

Remarks.--Transmountain diversion above station to Moffat water tunnel since May 26, 1937; flood peaks are substantially affected by the diversion. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 15, 1935	2,64	396	1950	July 13, 1950	1.51	50
1936 1937 1938 1939 1940	May 30, 1936 May 18, 1937 June 29, 1938 May 9, 1939 Apr. 22, 1940	2.27 1.91 2.27 1.66 1.12	273 155 263 67 19	1951 1952 1953 1954	June 21, 1951 June 10, 1952 June 14, 1953 Nov. 9, 1953 Nov. 21, 1953 Dec. 17, 1954	2.89 3.13 2.57 al.54	314 470 228 21
1941 1942	June 18, 1941 June 18, 1942	2.08 2.42	187 2 94	1333	Apr. 26, 1955	a2.58	20
1943 1944 1945	June 23, 1943 June 16, 1944 May 11, 1945	2.19 1.97 1.47	234 152 55	1956 1957 1958 1959	May 23, 1956 July 2, 1957 May 23, 1958 June 8, 1959	2.75 2.75 2.68 1.79	338 322 275 88
1946 1947 1948	Apr. 25, 1946 June 21, 1947 May 20, 1948	1.37 2.46	37 225	1960	June 17, 1960	2.59	290
1949	May 20, 1948 June 17, 1949	2.39 2.51	210 250	1961 1962	June 16, 1961 June 30, 1962	2.08 2.32	151 21 1

a Backwater from ice.

265. St. Louis Creek near Fraser, Colo.

Location.--Lat 39°54'30", long 105°52'45", in sec.34, T.1 S., R.76 W., on left bank 300 ft downstream from West St. Louis Creek and 4 miles southwest of Fraser.

Drainage area .-- 32.8 sq mi.

Gage .-- Recording. Datum of gage is 8,980.17 ft above mean sea level, unad justed.

Stage-discharge relation. -- Defined by current-meter measurements below 420 cfs.

 $\frac{\text{Remarks.--No regulation or diversion above station.}}{\text{from snowmelt.}} \text{ Base for partial-duration series, 240 cfs.}$

Peak stages and discharge	ges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 15, 1935	2.58	353	1949	July 6, 1949	2.24	247
1936	May 30, 1936 June 13, 1936	2.34 2.27	262 241	1950	June 17, 1950	2.46	293
1937	June 25, 1937	2.12	214	1951	June 21, 1951	2.61	377
1938	June 21, 1938	2.54	312	1952 1953	June 15, 1952 June 18, 1953	2.89	470 400
1939	May 31, 1939	2.32	256	1954	May 20, 1954	1.77	101
1940 1941	June 2, 1940 June 24, 1941	2,02	175 248	1955	June 22, 1955	1.91	153
1942	June 18, 1942	2.46	299	1956	Mar. 19, 1956 June 2, 1956	a2.38 l.91	147
1943	June 22, 1943	2,32	285	1957	July 1, 1957	2,72	419
1944	June 21, 1944	2.29	271	1958	June 6, 1958	2.44	301
1945	June 24, 1945	2.28	250	1959	Nov. 19, 1958 June 20, 1959	al.66 1.61	- 78
1946	June 17, 1946	2.30	256	1960	June 17, 1960	2.19	217
1947	June 8, 1947 June 21, 1947 July 2, 1947	2.27 2.36 2.37	246 273 276	1961	June 23, 1961	1.52	65
1948	June 3, 1948	2.29	242	1962	Nov. 6, 1961 June 30, 1962	a2.67 2.25	- 254
1949	June 16, 1949	2.31	268				

a Backwater from ice.

280. Ranch Creek above forks, near Fraser, Colo.

Location.--Lat 39°56'30", long 105°44'00", in SW $\frac{1}{4}$ sec.24, T.1 S., R.75 W., 0.8 mile upstream from North Fork and $4\frac{1}{2}$ miles east of Fraser.

Drainage area .-- 3.8 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 9,500 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurement below 45 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 35 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 26, 1937	2.06	41	1941	May 13, 1941	1.91	47
1938	June 21, 1938	3.45	67		May 17, 1941 May 26, 1941 June 17, 1941	1.92 1.91 2.19	48 46 62
1939	May 31, 1939	2.73	34	1942	June 6, 1942	2.52	82
1940	June 4, 1940 June 14, 1940	1.95 1.80	46 38	1342	June 17, 1942	2.56	85

285, North Fork Ranch Creek near Fraser, Colo.

Location.--Lat 39°57'00", long 105°44'20", in NE $\frac{1}{4}$ sec.23, T.1 S., R.75 W., 0.6 mile upstream from mouth and 4 miles east of Fraser.

Drainage area .-- 3.6 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 9,400 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 40 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 25 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 2, 1937	1.63	21	1940	June 14, 1940	1.61	25
1938	June 21, 1938	2.00	62	1941	June 3, 1941 June 17, 1941	1.65 1.72	28 33
1939	May 31, 1939	1.75	38	3.010	_		
1940	June 2, 1940	1.68	31	1942	June 7, 1942	1.81	43

300. Middle Fork Ranch Creek near Fraser, Colo. (Published as Middle Ranch Creek at upper station, near Arrow 1908-9)

Location. -- Lat 39°56'00", long 105°44'20", on line between secs. 25 and 26, T.1 S., R.75 W., 1.6 miles upstream from South Fork and 4.2 miles east of Fraser.

Drainage area. -- 4.4 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 9,430 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 90 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt.

Base for partial-duration series, 70 cfs.

Peak stages and discharges

		Gage	1			Gage	
Water year	Date	height (feet)	Discharge (cfs)	Water year	Date	height (feet)	Discharge (cfs)
1937	May 24, 1937	1.56	44	1941	June 17, 1941	1.53	77
1938	June 21, 1938	1.88	124	1942	June 6, 1942 June 18, 1942	1.71 1.68	108 102
1939	May 31, 1939	1.51	68]	June 10, 1542	1,00	102
1940	June 3, 1940	1.75	110		L		

305. South Fork Ranch Creek near Winter Park, Colo.

Location.--Lat 39°54'45", long 105°44'35", in $SE_{\frac{1}{4}}^1$ sec.35, T.1 S., R.75 W., 2.5 miles upstream from mouth and 2 miles northeast of Winter Park.

Drainage area .-- 2.55 sq mi.

Gage .-- Recording. Altitude of gage is 9,600 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 30 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 25 cfs.

57

1.27

Peak stages and discharges of South Fork Ranch Creek near Winter Park, Colo. Gage Gage Discharge (cfs) Water Discharge Water Date height (feet) Date height (cfs) vear year (feet) 1, 1940 24 1937 15, 1937 1940 1.14 May 1.23 32 June 1938 June 1, 1938 1.43 59 1941 May 30, 1941 1.31 43 22, 1939 31, 1939 1.36 58 1942 June 6, 1942 June 18, 1942 1.58 95 1939 May

320. Ranch Creek near Fraser, Colo.

Location .-- Lat 39°57'00". , long $105^{\circ}45^{\circ}54$ ", in $NW_{4}^{1}NE_{4}^{1}$ sec.22, T.1 S., R.75 W., on right bank 450 ft downstream from Middle Fork and 2.7 miles east of Fraser.

Drainage area .-- 19.9 sq mi.

May

Gage .-- Recording. Altitude of gage is 8,670 ft (from topographic map).

1.27

Stage-discharge relation. -- Defined by current-meter measurements below 370 cfs. Bankfull stage .-- 3 ft.

Remarks.--Diversion above station for irrigation of hay meadows and, since
May 15, 1949, diversion to Moffat water tunnel which should substantially affect flood peaks. Peak flows are principally from snowmelt. Base for partial-duration series, 140 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 15, 1935	3.37	299	1948	June 3, 1948	2.78	150
1936	May 30, 1936	2.80	199	1949	June 19, 1949	3.12	272
1937	June 24, 1937	2,12	103	1950	June 16, 1950	2.30	124
1938	June 3, 1938 June 21, 1938	3.27 3.35	260 266	1951	June 21, 1951	2.91	232
1939	May 23, 1939	2.42	147	1952	June 10, 1952	3.65	387
1303	May 31, 1939	2.68	184	1953	June 14, 1953	2.60	174
1940	June 4, 1940	2.40	139	1954	June 19, 1954	1.13	18
1941	June 17, 1941	2.63	169	1955	June 8, 1955	1.25	24
1942	June 6, 1942 June 17, 1942	3.26 3.05	259 228	1956	June 2, 1956	1.88	75
1943	June 9, 1943	2.60	170	1957	June 28, 1957	3,72	402
1944	June 9, 1944	2.68	176	1958	May 28, 1958	2.79	215
1945	June 24, 1945	2.72	178	1959	June 14, 1959	2.28	132
	_			1960	June 18, 1960	2.82	222
1946	June 6, 1946	2.57	160	1961	June 21, 1961	1.60	55
1947	June 8, 1947	2.80	194		·	1.00	
	June 20, 1947 June 28, 1947	2.97 2.59	218 165	1962	Nov. 8, 1961 June 30, 1962	a3.01 2.70	211
1948	May 21, 1948	2.93	201				
a Bac	ckwater from 1ce.						

325. Ranch Creek near Tabernash, Colo.

Location.--Lat 39°59'51", long 105°49'22", in $NE_{\frac{1}{2}}^{1}NW_{\frac{1}{4}}^{1}$ sec.6, T.1 S., R.75 W., on right bank a quarter of a mile upstream from Meadow Creek and 1.2 miles east Tabernash.

Drainage area .-- 50.7 sq mi.

Gage .-- Recording. Datum of gage is 8,339.79 ft above mean sea level, datum of

Stage-discharge relation .-- Defined by current-meter measurements below 540 cfs. Bankfull stage. -- 41 ft.

Remarks .-- Several small diversions above station for irrigation of about 300 acres of hay meadows and, since May 15, 1949, diversion to Moffat water tunnel which should substantially affect flood peaks. Peak flows are principally from snowmelt. Base for partial-duration series, 250 cfs.

			Peak stages a	and disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 15, 1935	4.40	506	1948	May 22, 1948	3.64	362
1936	May 27, 1936	4.10	428	1949	June 18, 1949	4.00	470
1937	May 25, 1937	3.35	254	1950	June 11, 1950	3.29	248
1938	June 4, 1938	4.30	450	1951	June 18, 1951	3.75	402
1939	May 22, 1939 May 31, 1939	3.46 3.70	276 324	1952	June 11, 1952	4.63	636
1940	June 2, 1940	3.37	250	1953	June 19, 1953	4.10	460
1941	May 26, 1941	3.42	278	1954	May 23, 1954	2.50	\$8
1942	June 7, 1942	4.17	400	1955	May 15, 1955	2.62	111
				1956	May 23, 1956	3.84	382
1943	May 30, 1943 June 10, 1943	3.64 3.55	312 290	1957	June 29, 1957	5.01	754
1944	June 10, 1944 June 20, 1944	- 3.39	a240 248	1958	May 2, 1958 May 29, 1958	b4.25 3.96	- 445
1945	June 25, 1945	3.47	270	1959	June 10, 1959	3.37	279
1946	June 6, 1946	3.41	266	1960	Mar. 25, 1960 June 6, 1960	b5.63 3.76	402
1947	June 9, 1947 June 21, 1947	3.43 3.82	299 416		ounc 0, 1900	5.76	402

a Estimated daily discharge; annual flood probably occurred on this day. b Backwater from ice.

330. Meadow Creek near Tabernash, Colo.

Location. -- Lat 40°02'55", long 105°46'30", in sec.15, T.1 N., R.75 W., on right bank 5 miles northeast of Tabernash.

Drainage area. -- 7.0 sq mi, approximately.

Gage . - - Recording . e.--Recording. Prior to Sept. 23, 1940, at site 1,000 ft upstream at different datum. Altitude of gage is 9,780 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 280 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt.

Base for partial-duration series, 150 cfs.

Peak stages and discharges of Meadow Creek near Tabernash, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1936	May 31, 1936	3.37	177	1949	June 5, 1949	3.35	181	
1937	May 22, 1937	3.05	141		June 9, 1949 June 12, 1949	3.40 3.38	190 186	
1938	June 3, 1938	3.67	197	1950	June 1, 1950 June 7, 1950	3.28 3.42	168 186	
1939	May 22, 1939	3.22	158	l	, , , ,	0.10	100	
	May 31, 1939	3.52	188	1951	June 17, 1951	3.72	255	
1940	May 31, 1940	3.22	148	1952	June 4, 1952	3.44	184	
1941	May 25, 1941	3.22	150		June 10, 1952	4.22	316	
1942	June 5, 1942	3.52	204	1953	June 12, 1953 June 19, 1953	3.43 3.93	192 283	
1943	May 30, 1943	3.22	150	1954	Apr. 23, 1954	a3.13	-	
1944	June 9, 1944	3,72	244		May 17, 1954	2.98	103	
1945	June 13, 1945	3.38	169	1955	Apr. 24, 1955 May 15, 1955	a4.20 3.14	- 129	
1946	June 6, 1946	3.29	162	1956	May 23, 1956	3.76	230	
1947	June 8, 1947	3.56	197		May 25, 1956 May 30, 1956	3.74 3.55	226 188	
1948	May 22, 1948	3.61	222					

a Backwater from ice.

335. Strawberry Creek near Granby, Colo.

Location. -- Lat 40°05'10", long 105°49'30", in $SW_u^{\frac{1}{4}}SW_u^{\frac{1}{4}}$ sec. 32, T.2 N., R.75 W., 0.6 mile downstream from Little Strawberry Creek and 6 miles east of Granby.

Drainage area .-- 12.6 sq mi.

Gage .-- Recording. Altitude of gage is 8,650 ft (from topographic map).

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 110 cfs. <u>Bankfull stage</u>.-- $1\frac{1}{2}$ ft.

Remarks. -- Diversions for irrigation above station and in Walden Hollow; probably does not substantially affect flood peaks. Peaks are principally from snowmelt. Base for partial-duration series, 50 cfs.

Water year		Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	May	28, 1936	1.23	48	1941	May 13, 1941	2.09	93
1937	May	16, 1937	1.65	52	1942	May 26, 1942	2.35	116
1938	May May May	2, 1938 17, 1938 29, 1938	2.20 2.75 2.91	76 121 132	1943	May 2, 1943 May 30, 1943	1.74 1.63	77 66
1939	May	2, 1939	2.12	71	1944	May 30, 1944	1.94	73
1940	May	11, 1940	1.66	48	1945	June 1, 1945	1.91	51

340 Fraser River at Granby, Colo. (Published as "near Coulter" 1904)

Location.--Lat 40°05'00", long 105°56'50", in sec.1, T.1 N., R.76 $\frac{1}{2}$ W., on left bank just downstream from Tenmile Creek, half a mile southwest of Granby, and $2\frac{1}{2}$ miles upstream from mouth.

Drainage area. -- 285 sq mi.

<u>Gage.</u>--Nonrecording July 28, 1904, to Sept. 30, 1909, at former bridge near present site at different datum; recording thereafter. Altitude of gage is 7,900 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurement below 2,400 cfs. Bankfull stage.--3 ft.

Remarks.--Diversions above station for irrigation of about 8,000 acres and since 1937, diversion to Moffat water tunnel. Flood peaks are substantially affected by diversion. Peak flows are principally from snowmelt. Only annual peaks are shown.

			Peak stages a	nd disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 5,9, 1905	6.7	1,650	1945	June 26, 1945	2.10	730
1906 1907 1908 1909	June 14, 1906 June 16, 1907 June 13, 1908 June 20, 1909	6.9 6.8 6.1 7.2	1,920 1,680 950 1,890	1946 1947 1948 1949	June 18, 1946 June 22, 1947 May 22, 1948 June 18, 1949	2.15 3.16 2.93 3.24	782 1,520 1,290 1,530
1938 1939 1940	May 30, 1938 June 1, 1939 June 3, 1940	2.76 2.60 1.88	1,080 984 517	1950 1951 1952 1953	June 17, 1950 June 21, 1951 June 8, 1952 June 20, 1953	2.23 3.37 3.65 3.42	718 1,910 2,500 1,460
1941 1942 1943 1944	May 14, 1941 June 5, 1942 June 2, 1943 June 10, 1944	2.45 2.95 2.45 2.65	867 1,640 1,220 1,270	1954	Apr. 7, 1954 May 23, 1954 Apr. 17, 1955	a2.03 - 2.12	228

1944 June 10, 1944 2.65 1,270 1955 Apr. 17, 1955 a Backwater from ice.

COLORADO RIVER MAIN STEM

345. Colorado River at Hot Sulphur Springs, Colo.

Location.--Lat 40°05'00", long 106°05'15", in $NE_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.1, T.1 N., R.78 W., on left bank 1,000 ft north of U.S. Highway 40, I mile northeast of Hot Sulphur Springs, and $4\frac{1}{2}$ miles upstream from Beaver Creek.

Drainage area. -- 782 sq mi.

<u>Gage.--Nonrecording prior to Sept. 19, 1930; recording thereafter.</u> July 28, 1904, to Apr. 16, 1906, at bridge $1^{\frac{1}{4}}$ miles downstream at different datum. Apr. 17, 1906, to Sept. 18, 1930, at bridge 1 mile downstream at datum 7,651.26 ft above mean sea level, unadjusted. Altitude of gage is 7,670 ft (from railroad elevations).

Stage-discharge relation. -- Defined by current-meter measurements below 8,000 cfs.

Bankfull stage .-- 5 ft.

Remarks.--Diversion above station for irrigation of about 13,000 acres. Transmountain diversions to Grand River ditch and, since 1937, diversion to Moffat water tunnel. Regulation by Granby Reservoir began in June 1950. Prior to 1937, diversion probably did not substantially affect flood peaks. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges of Colorado River at Hot Sulphur Springs, Colo.

1905 1906 1907 1908 1909	June 8, 1905 June 15, 1906 June 17, 1907	9.10	5,780	3.077			
1907 1908 1909		2.55		1937	May 17, 1937	3.13	2,540
1909	June 17, 1908	6.20 6.35 4.90	5,590 5,600 2,760	1938 1939 1940	May 30, 1938 June 1, 1939 June 2, 1940	4.56 3.74 3.29	5,110 3,630 2,820
	June 26, 1909	6.90	6,420	1941 1942	May 14, 1941 June 13, 1942	3.83 4.28	3,790 4,600
1913 1914 1915	June 8, 1912 May 31, 1913 June 2, 1914 June 25, 1915	7.45 5.85 8.00 5.95	6,700 3,900 8,000 4,060	1943 1944 1945	June 2, 1943 June 11, 1944 June 25, 1945	3.73 3.68 3.56	3,520 3,620 3,360
1916 1917 1918 1919 1920	May 10, 1916 June 23, 1917 June 14, 1918 May 29, 1919 June 9, 1920	5.45 7.45 8.53 5.45 7.25	3,540 6,960 8,770 3,620 6,750	1946 1947 1948 1949 1950	June 8, 1946 June 22, 1947 May 22, 1948 June 18, 1949 June 2, 1950	3.39 4.19 4.05 4.44 2.13	3,060 4,720 4,300 5,200 1,140
1921 1922 1923 1924	June 15, 1921 June 14, 1922 June 16, 1923 June 14, 1924	8.7 6,15 7.55 8.3	10,300 3,790 6,600 8,950	1951 1952 1953 1954	June 21, 1951 June 8, 1952 June 20, 1953 Nov. 29, 1953 May 23, 1954	3.03 3.65 2.65 a2.07	2,530 3,750 1,930 - 358
1926 1927	June 7, 1926 May 22, 1927	7.40 6.75	5,950 4,580	1955	Dec. 19, 1954 May 16, 1955	al.79	- 485
1928	May 31, 1928 May 31, 1930	8.10 6.75	6,660 3,600	1956 1957 1958	May 23, 1956 June 8, 1957 May 27, 1958	2.83 3.45 3.21	2,220 3,430 2,830
1931 1932 1933	June 8, 1931 May 23, 1932 June 12, 1933	3.80 4.38 5.24	3,120 3,790 5,640	1959 1960	Feb. 9, 1959 June 28, 1959 June 18, 1960	2.14 2.19	832 1,220
1934 1935	May 31, 1934 June 16, 1935 June 1, 1936	3.16 5.06	2,360 5,620 4.340	1961 1962	Sept.29, 1961 Nov. 22, 1961 May 13, 1962	1.56 a5.52	638 - 2,720

a Backwater from ice.

WILLIAMS FORK BASIN

355. Williams Fork below Steelman Creek, Colo. (Formerly published as Williams River below Steelman Creek)

Location.--Lat 39°46'45", long 105°55'30", in sec.20, T.3 S., R.76 W., a short distance downstream from Steelman Creek and 7 miles southeast of Leal.

Drainage area .-- 16.3 sq mi.

 $\underline{\text{Gage.--Nonrecording prior}}$ to July 21, 1933; recording thereafter. Altitude of gage is 9,840 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 260 cfs.

Remarks.--Transmountain diversion above station to Jones Pass tunnel since
May 10, 1940; peak flows are substantially affected by the diversion. Peaks
are principally from snowmelt. Base for partial-duration series, 150 cfs.

Peak stages and discharges

			ream boases c	4150	G1600		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	May 30, 1934	-	150	1938	June 5, 1938 June 21, 1938	2.11	257 441
1935	June 15, 1935	2.45	332	3070		[
1936	May 30, 1936 June 16, 1936	2.17	254 206	1939	May 22, 1939 June 5, 1939 June 14, 1939	1.91 2.03 1.97	203 257 234
1937	June 25, 1937 June 30, 1937	2.23 1.99	279 242	1940	June 1, 1940	1.35	68
1938	May 29, 1938	1.95	178	1941	June 24, 1941	2.22	321

360. Williams Fork near Leal, Colo. (Published as Williams River near Leal prior to October 1959)

Location. -- Lat 39°49'55", long 106°03'20", in sec.31, T.2 S., R.77 W., on right bank 120 ft downstream from Kinney Creek and 1.7 miles northwest of Leal.

Drainage area .-- 89.5 sq mi.

Gage .-- Recording. Altitude of gage is 8,790 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Remarks. -- Transmountain diversion above station to Jones Pass tunnel since May 10, 1940; peak flows are substantially affected during diversion periods. Peak flows are principally from snowmelt. Base for partial-duration series, 650 cfs. Only annual peaks are shown subsequent to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	May 30, 1934	2.18	620	1944 1945	June 21, 1944 June 26, 1945	3.35 2.87	1,040 730
1935	June 15, 1935	3.49	1,330				
1936	May 31, 1936 June 13, 1936	2.78 2.53	966 816	1946 1947 1948 1949	June 10, 1946 June 21, 1947 June 3, 1948	3.08 3.68 3.14	868 1,210 904
1937	June 26, 1937	2.31	686	1950	June 17, 1949 June 17, 1950	3.52 3.60	1,140 1,200
1938	June 3, 1938 June 11, 1938 June 21, 1938	3.42 3.81	1,400 - 1,530	1951 1952 1953 1954	June 21, 1951 June 10, 1952 June 13, 1953 May 20, 1954	3.65 4.23 3.93 1.92	1,240 1,720 1,450 256
1939	May 23, 1939 May 31, 1939	2.82 3.20	792 1,030	1955	June 9, 1955	2.37	432
	June 5, 1939 June 14, 1939	3.12 2.80	978 780	1956 1957 1958	June 2, 1956 June 29, 1957 June 5, 1958	3,44 3,86 3,65	1,010 1,480 1,300
1940	June 2, 1940	2.48	588	1959 1960	June 16, 1959 June 18, 1960	3.08 2.98	838 1,090
1941	June 24, 1941	3.11	972		,		
1942 1943	June 19, 1942 June 22, 1943	3.59 3.15	1,290 998	1961 1962	June 9, 1961 June 30, 1962	2.41 3.17	676 1,100

365. Keyser Creek near Leal, Colo.

Location.--Lat 39°54'30", long 106°01'00", in SW_4^1 sec.33, T.1 S., R.77 W., on right bank 200 ft upstream from Simpson Creek and 7 miles northeast of Leal.

Drainage area. -- 13.7 sq mi.

Gage .-- Recording. Altitude of gage is 9,080 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 130 cfs.

Bankfull stage.--5 ft.

Remarks.--No diversion above station. Peak flows are principally from snowmelt.

Base for partial-duration series, 100 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 30, 1943 June 9, 1943	2.65 2.44	132 102	1948	May 21, 1948	2.78	167
	June 26, 1943	2.71	139	1949	May 26, 1949 June 17, 1949	2.35 2.80	107 149
1944	June 9, 1944	2,83	129	1950	June 7, 1950	2.47	101
1945	May 30, 1945 June 24, 1945	2.57 2.60	106 109		June 17, 1950	2.82	149
1946	June 17, 1946	2.87	139	1951	May 30, 1951 June 21, 1951	2.83 3.01	128 150
1947	June 9, 1947 June 21, 1947 June 29, 1947	2.89 2.72	110 154 128	1952	June 7, 1952	3.29	210

370. Williams Fork near Scholl, Colo.

Location. -- Lat 39°54'20", long 106°05'55", in sec.3, T.2 S., R.78 W., at Horse-shoe ranger station, three-quarters of a mile downstream from Keyser Creek, 5 miles southeast of Scholl, and 11 miles south of Parshall.

Drainage area .-- 143 sq mi.

Gage. -- Nonrecording. Altitude of gage is 8,370 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,200 cfs.

Remarks.--Diversions for irrigation of hay meadows above station; probably does not affect flood peaks. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 16, 1911	3.20	865	1915	June 11,18,1915	3.9	1,310
1912 1913 1914	June 8, 1912 May 31, 1913 June 2, 1914	4.00 3.1 4.4	1,390 800 1,670	1916	June 19, 1916	3.15	836

375. Williams Fork near Parshall, Colo. (Published as "near Hot Sulphur Springs" 1904-6, as "near Sulphur Springs" 1907-13, and as Williams River near Parshall 1933-58)

Location.--Lat 40°00'01", long 106°10'45", in SW\(\frac{1}{4}\) sec.31, T.1 N., R.78 W., on right bank 150 ft downstream from bridge on State Highway 286, 2\(\frac{1}{2}\) miles upstream from Battle Creek, and 4 miles south of Parshall.

Drainage area .-- 186 sq mi.

Gage. --Nonrecording prior to Oct. 18, 1919; recording thereafter. Prior to Sept. 30, 1924, at site 1½ miles downstream at different datum. Jun⇒ 19, 1933, to Aug. 8, 1938, at bridge 150 ft upstream at datum 1.00 ft higher. Datum of gage is 7,805.00 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 1,600 cfs.

Bankfull stage .-- 4 ft.

Remarks.--Diversions above station for irrigation of about 1,690 acres. About 140 acres above station irrigated by diversions into the drainage basin.

Since May 10, 1940, transmountain diversion by Jones Pass tunnel probably affects peak flows during periods of diversion. Peak flows are principally from snowmelt. Base for partial-duration series, 820 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 9, 1905	5.00	990	1934	May 30, 1934	2.62	630
1906	June 15, 1906	5.27	1,230	1935	June 16, 1935	4.00	1,460
1907	July 1, 1907	5.03	1,240	1936	May 31, 1936	3.42	1,100
1908	June 12,17, 1908	4.73	849	1 2300	June 14, 1936	3.04	869
1909	June 20, 1909	5.35	1,480	1937	June 26, 1937	2.94	818
1910	June 3, 1910	4.84	945	1938	June 22, 1938	3.77	1,230
	.,			1939	June 1, 1939	3.24	795
1911	June 10, 1911	4.70	805	1940	June 3, 1940	2.85	585
1912	June 8, 1912	5.20	1,320	1			
1913	June 1, 1913	4.60	850	1941	June 25, 1941	3,13	740
1914	June 1, 1914	5.20	1,610	1942	June 19, 1942	3,43	892
1915	June 25, 1915	4.86	1,230	1943	June 23, 1943	3.24	815
2020	T 30 3030		1 070	1944	June 22, 1944	3.15	922
1916 1917	June 19, 1916	4.68 5.2	1,030	1945	June 26, 1945	3.12	754
1918	June 18, 1917 June 14, 1918	6.05	1,690	1946	June 18, 1946	3.50	1,020
1919	May 29, 1919	4.4	2,620 830	1947	June 21, 1947	3.90	1,020
1920	June 9, 1920	4.75	1,320	1948	May 23, 1948	3.45	880
1320	Julie 3, 1320	4.75	1,520	1949	June 18, 1949	3.43	1,180
1921	June 11, 1921	4.95	1,510	1950	June 18, 1950	3.55	960
1922	June 14, 1922	4.2	820	1000		3.00	300
1923	June 13, 1923	4.38	980	1951	June 21, 1951	3.82	1,310
1924	June 13, 1924	4.36	964	1952	June 15, 1952	4.06	1,610

Peak stages and discharges of Williams Fork near Parshall, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	June 14, 1953	4.30	1.340	1957	June 29, 1957	4.54	1,350
1954	Mar. 3, 1954	a3.76	- 1	1958	June 6, 1958	4.59	1,310
	May 21, 1954	2.32	188	1959	June 17, 1959	4.02	850
1955	Apr. 6, 1955	a4.28		1960	June 18, 1960	4.11	918
	June 9, 1955	3.02	362				
	1	'	1	1961	June 2, 1961	3.77	697
1956	Mar. 17, 1956	a4.04	-	1962	June 15, 1962	4.32	1,120
	June 3, 1956	4.00	865	·			

a Backwater from ice.

TROUBLESOME CREEK BASIN

390. Troublesome Creek near Pearmont, Colo.

<u>Location</u>.--Lat 40°13'03", long 106°18'45", in $SE_{\overline{u}}^1$ sec.14, T.E N., R.80 W., on left bank 45 ft downstream from small tributary, 3 miles rorth of Pearmont, 4 miles downstream from Rabbit Ear Creek, $5\frac{1}{4}$ miles upstream from East Fork, and 12 miles northeast of Kremmling.

Drainage area .-- 44.6 sq mi.

Gage .-- Recording. Altitude of gage is 8,049 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 370 cfs.

Remarks.--One diversion above station for irrigation of about 250 acres. Flow partly regulated during irrigation seasons by one reservoir (capacity, 1,070 acre-ft). Regulation and diversion materially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Dec. 24, 1953	a2.52		1959	June 8, 1959	1.93	118
	May 22, 1954		85	1960	Mar. 22, 1960	a2.29	-
1955	May 24, 1955	2.37	168	ļ	May 14, 1960	-	180
1956	Mar. 25, 1956	a3.00	-	1961	Mar. 23, 1961	a2.98	-
	May 23, 1956	l –	256		May 31, 1961	-	134
1957	June 7, 1957	3.48	503	1962	Mar. 26, 1962	a3.72	_
1958	May 23, 1958	2.70	332	L	May 11, 1962		382

a Backwater from ice

395. Troublesome Creek at Atmore Ranch, near Troublesome, Colo.

Location.--Lat 40°12', long 106°19', in SE_4^1 sec.23, T.3 N., R.80 W., $3\frac{1}{4}$ miles upstream from East Fork Troublesome Creek and 10 miles north of Troublesome.

Drainage area .-- 50.3 sq mi.

Gage .-- Nonrecording. Altitude of gage is 7,900 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 210 cfs.

Bankfull stage .-- 4 ft.

Remarks.--Diversions for irrigation of about 500 acres. Records 1937-40 furnished by Bureau of Reclamation. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937 1938 1939 1940	May 18, 1937 June 4, 1938 May 19, 1939 May 11, 1940	1.82 2.46 2.36 2.10	103 228 209 126	1941 1942 1943	May 13, 1941 May 27, 1942 May 2, 1943	2.78 2.70 2.40	209 190 144

400. East Fork Troublesome Creek near Troublesome, Colo.

Location.--Lat 40°09'27", long 106°16'58", in NW $\frac{1}{4}$ sec.7, T.2 N., R.79 W., on right bank 300 ft upstream from mouth and $6\frac{1}{2}$ miles north of Troublesome.

Drainage area. -- 81.4 sq mi.

 $\frac{\text{Gage.--Nonrecording.}}{\text{sites all within 100 ft upstream; datum differences for all sites not more than 0.4 ft. Altitude of gage is 7,750 ft (by barometer).}$

Stage-discharge relation. -- Defined by current-meter measurements below 570 cfs.

Remarks.--Diversions for irrigation above station. Peak flows may be affected by diversions. Records 1937-40 furnished by Bureau of Reclamation. Peak flows are principally from snowmelt. Base for partial-duration series, 170 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 12, 1937	2.70	169	1957	May 10, 1957	3.94	303
1938	May 18, 1938	5.10	712		June 6, 1957 June 13, 1957 June 21, 1957	5.19 4.37 3.92	716 420 308
1939	May 6, 1939	2.70	267		Julie 21, 1937	3.32	300
1940	May 10,12,1940	2.20	168	1958	May 8, 1958 May 12, 1958 May 23, 1958	3.50 3.55	220 229
1941	May 14, 1941	-	350		May 23, 1958	4.23	370
1942	May 27, 1942	3.28	371	1959	May 14, 1959	3.14	140
1943	May 3, 1943	2.62	230	1960	Mar. 13, 1960	3.73	248
1954	Apr. 25, 1954	2.99	130	1961	May 22, 1961	3.32	161
1955	May 2, 1955	2.97	126	1962	Apr. 20, 1962 Apr. 25, 1962	4.07 4.09	342 363
1956	May 8, 1956 May 22, 1956	3.62 3.70	310 406		May 9, 1962 May 27, 1962	5.11 3.55	720 210

405. Troublesome Creek near Troublesome, Colo. (Published as Troublesome River at Troublesome, 1904-5)

Location. --Lat 40°04', long 106°19', in sec.12, T.1 N., R.80 W., 50 ft upstream from bridge on U.S. Highway 40, half a mile upstream from mouth, and half a mile west of old Troublesome Post Office.

Drainage area. -- 178 sq mi.

Gage. --Nonrecording prior to Oct. 24, 1942; recording thereafter. At site a quarter of a mile upstream prior to Sept. 28, 1949. At different datum July 22, 1904, to Oct. 31, 1905. At datum 6.85 ft higher Apr. 26, 1932, to Sept. 30, 1924. At datum 7.03 ft higher July 1, 1937, to Sept. 28, 1949, and at present site and datum thereafter. Datum of present gage is 7,344.13 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 620 cfs.

Remarks.--Diversions for irrigation of about 4,000 acres. Peak flows are believed not substantially affected during diversion periods. Peak flows are principally from snowmelt. Base for partial-duration series, 350 cfs.

	reak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1905	June 5, 1905	3.85	643	1939	May 1, 193	9 3.06	460				
1922	May 26, 1922	2.70	350	1940	May 13, 194	0 2.50	233				
1923	May 27, 1923	3.32	672	1941	May 14, 194	1 3.78	740				
1924	June 6, 1924	2.90	440	1942	May 27, 194	2 3.50	640				
1938	May 16, 1938	3.28	562	1943	May 3, 19	3,06	460				

Peak stages and discharges of Troublesome Creek near Troublesome, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 30, 1943 June 2, 1943	3.02 3.18	420 472	1951	May 29, 1951 June 20, 1951	5.57 5.17	516 396
1944	May 24, 1944	2.88	392	1952	May 6, 1952 May 15, 1952	6.90 5.74	1,060 627
1945	May 14, 1945 July 23, 1945	2.99 4.80	406 1,230		June 7, 1952	5.83	613
1946	Apr. 30, 1946	2.63	290	1953	July 17, 1953	4.81	361
1947	June 11, 1947	2.83	362	1954	Dec. 9, 1953 Apr. 25, 1954	a4.97 3.49	105
	May 8, 1947	3.37	530	1955	Mar. 1, 1955	a6.43	-
1948	Apr. 18, 1948 May 21, 1948	2.78 3.57	378 561		May 2, 1955	4.06	169
1949	May 16, 1949	3.52	394	1956	May 23, 1956	5.24	422
1950	May 22, 1950	4.61	275				

a Backwater from ice.

MUDDY CREEK BASIN

410. Muddy Creek near Kremmling, Colo.

Location. --Lat 40°17'37", long 106°28'59", in $SE^{\frac{1}{4}}$ sec.20, T.4 N., R.81 W., a quarter of a mile upstream from Lindsey Creek, 3 miles downstream from Albert Creek, and 17 miles northwest of Kremmling.

Drainage area .-- 74.2 sq mi.

Gage. -- Nonrecording at site 3 miles upstream at different datum prior to October 1956; recording thereafter. Altitude of gage is 7,856 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 350 cfs. Bankfull stage.--4 ft.

Remarks.--Diversions above station for irrigation of about 900 acres, most of which is above station. Some regulation by Barber Reservoir (capacity, 4,290 acre-ft). Regulation and diversion probably affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 28, 1938	3.28	490	1958	May 24, 1958	5.66	654
1939	May 4,6, 1939	3.49	540	1959	May 14, 1959 May 22, 1959	5.39 5.15	546 458
1940	May 13, 1940	3.06	416		June 7, 1959	5.28	503
1941	May 14, 1941	3.86	658	1960	Apr. 8, 1960 Apr. 21, 1960	5.27 4.83	514 360
1342	May 27, 1942	3.23	490	1	May 14, 1960 June 1, 1960	5.00 4.90	426 394
1943	May 3, 1943	3.20	498		June 16, 1960	4.65	308
1956	May 22, 1956	5.19	522	1961	May 12, 1961	4.70	350
1957	May 9, 1957 May 19, 1957	6.46 4.92	992 377		May 23, 1961 May 28, 1961	4.88 4.99	413 452
	June 7, 1957	5.87	738	1962	Apr. 17, 1962	a6.72	. . .
	June 14, 1957 June 21, 1957	6.01 5.28	794 503		Apr. 28, 1962 May 13, 1962 June 3, 1962	5.78 5.68 4.83	811 816 456
1958	May 13, 1958	5.57	618		,		

a Backwater from ice.

411. Antelope Creek near Kremmling, Colo.

<u>Location</u>.--Lat 40°14'26", long 106°22'23", in N_2^1 sec.8, T.3 N., R.80 W., on right bank 5.8 miles upstream from mouth and $12\frac{1}{2}$ miles north of Kremmling.

Drainage area. -- 10.6 sq mi.

Gage .-- Recording. Altitude of gage is 7,933 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 5 cfs and extended to 148 cfs on basis of slope-area measurement of peak flow.

Remarks. -- No diversion or regulation above station. Peaks are principally from snowmelt. Base for partial-duration series, 15 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 8, 1956	2.09	17	1959	May 13, 1959	1.87	18
1957	May 8, 1957 June 6, 1957 June 15, 1957	2.43 2.14 2.11	45 31 30	1960	Mar. 27, 1960 Apr. 8, 1960	2.70 2.04	148 34
	July 7, 1957	1.95	20	1961	May 11, 1961 May 26, 1961	1.77 1.75	16 15
1958	May 5, 1958	2.04	25	ł			
	May 11, 1958	2.01	24	1962	Apr. 23, 1962	1.67	67
	May 19, 1958	1.99	22		May 7, 1962	1.42	31

413. Pass Creek near Kremmling, Colo.

<u>Location</u>.--Lat 40°08'00", long 106°29'20", in $NW_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.20, \overline{T} .2 \overline{N} ., R.81 W., on left bank half a mile downstream from Burke Spring Creek, 6 miles upstream from mouth, and $7\frac{1}{2}$ miles northwest of Kremmling.

Drainage area. -- 17.8 sq mi.

Gage .-- Recording. Altitude of gage is 7,840 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 75 cfs.

Remarks.--Several small diversions above station. Some regulation by small reservoir on Spring Creek. Diversions and regulation materially affect peak flow. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958 1959 1960	May 22, 1958 May 18, 1959 Mar. 20, 1960 May 13, 1960	3.16 3.16 a3.93	107 105 - 75	1961 1962	Dec. 13, 1960 May 21, 1961 May 11, 1962	a3.25 - 3.63	- 68 204

a Backwater from ice.

470. Blue River at Dillon, Colo.

Location. --Lat 39°36'50", long 106°03'05", in sec.18, T.5 S., R.77 W., on right bank 5 ft upstream from bridge on U.S. Highway 6 at east edge of Dillon, 300 ft upstream from Snake River, and 1,000 ft upstream from Tenmile Creek.

Drainage area. -- 129 sq mi.

a Backwater from ice.

 $\underline{\text{Gage}}.\text{--Nonrecording prior}$ to Apr. 22, 1920; recording thereafter. Datum of gage is 8,821.17 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by discharge measurements below 920 cfs.

Remarks.--Transmountain diversion above station by Boreas Pass ditch. Diversions for irrigation of about 150 acres of hay meadows. Peak flows are not substantially affected during periods of diversion. Peak flows are principally from snowmelt. Base for partial-duration series, 500 cfs.

Peak stages and discharges Gage Gage Discharge (cfs) Water Discharge Water Date height Date height (cfs) year vear (feet) (feet) 2.98 1911 July 6, 1911 3.6 840 1937 June 26, 1937 588 732 1912 June 27, 1912 3.9 1,020 1938 June 6, 1938 3.37 1913 June 18, 1913 3.15 23, 1939 580 548 1939 Mav 6, 1939 June 2.99 520 1914 June 2, 1914 4.35 1,180 392 1940 June 2, 1940 3.05 1915 June 18, 1915 3.38 665 June 19, 1941 3.39 654 1941 1916 June 20, 1916 3.19 520 June 7, 1942 June 19, 1942 3.43 1942 714 1917 June 18, 1917 3.9 950 3.27 618 June 16, 1918 2.90 524 1918 3.7 900 1943 June 2, 1943 June 11, 1943 June 30, 1943 2.93 2.98 551 584 1919 May 28, 1919 3.0 510 1920 June 1, 1920 3.7 850 June 10, 1944 3.15 642 1944 June 15, 1945 June 25, 1945 500 1921 June 10, 1921 2.89 4.15 1,100 1945 610 3.09 1922 June 9, 1922 2.9 486 1946 June 9, 1946 3.00 585 1923 June 17, 1923 1,000 3.4 2.88 1947 May 11, 1947 June 9, 1947 518 2.97 1924 June 8, 1924 659 3.37 849 June 14, 1924 July 8, 1924 June 21, 1947 968 1,180 3.54 3.6 2.77 552 1948 23, 1948 8, 1948 3.31 786 Mav 1925 May 31, 1925 2.48 940 391 June 3.85 May 26, 1926 June 7, 1926 2.98 950 1926 768 1949 June 18, 1949 July 7, 1949 4.14 3.44 1,080 3.67 756 May 22, 1927 June 29, 1927 June 8, 1950 June 18, 1950 508 1927 3.01 637 1950 3.02 3.38 656 3,04 660 670 1, 1951 1928 May 30, 1928 3.22 1,030 1951 3.41 June 21, 1951 June 30, 1928 2.78 574 3.77 850 2.86 904 May 26, 1929 June 9, 1929 June 7, 1952 3.93 1929 568 1952 2.90 598 May 29, 1953 June 14, 1953 776 1953 3.44 May 31, 1930 June 13, 1930 1.930 2.89 592 3.75 930 2.83 553 198 May 24, 1954 2.04 1954 1931 June 8, 1931 2.75 505 1955 Jan. 1, 1955 June 15, 1955 a2.46 2.22 254 1932 May 23, 1932 2.84 499 5, 1956 3, 1956 1933 June 6, 1933 1956 a3.27 Feb. 622 June 13, 1933 3.00 600 June 3.16 June 21, 195. June 30, 1957 8, 1957 3.47 762 May 31, 1934 1934 2.55 1957 401 3.01 525 1935 June 15, 1935 3.28 809 3.43 738 3.22 630 May 31, 1936 June 14, 1936 1936 3.24 777 809 27, 1958 3.38 3.05 635 1958 May

Peak stages and discharges of Blue River at Dillon, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	June 8, 1958	3,39	814	1960	June 18, 1960	2.87	498
1959	June 15, 1959	2.99	546	1961	Jan. 1, 1961 Apr. 30, 1961	a3.71 1.25	- 43
1960	Dec. 18, 1960	a3.74	-	1		1	

a Backwater from ice.

475. Snake River near Montezuma, Colo.

Location. --Lat 39°36'20", long 105°56'33", in NW $_{4}^{1}$ sec.19, T.5 S., R.76 W. (projected), on right bank 200 ft downstream from North Fork and $4\frac{1}{2}$ miles northwest of Montezuma.

Drainage area .-- 58.9 sq mi.

Gage.--Nonrecording prior to Oct. 14, 1943; recording thereafter. Altitude of gage is 9,320 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Remarks. -- Small diversions above station for irrigation and domestic use materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 9, 1943	2.65	495	1956	June 2, 1956	2.61	901
1944	June 9, 1944	2.66	479	1957	June 28, 1957 July 13, 1957	3.54 3.42	858 712
1945	June 24, 1945	2,79	518	1050	,		
1946	June 6, 1946	2.90	567	1958	May 26, 1958 June 5, 1958	3.46 3.41	736 706
1952	June 10, 1952	3.51	1,250	1959	June 9, 1959 June 15, 1959	3.15 3.07	555 515
1953	June 13, 1953 June 18, 1953	2.94 2.74	93 4 708	1960	June 4, 1960	3.22	575
1954	May 19, 1954	2.02	214	1961	June 17, 1960 July 31, 1961	3.33 2.82	634 394
1955	June 8, 1955	2.30	460	1962	June 14, 1962	3.07	485

477. Keystone Gulch near Dillon, Colo.

<u>Location</u>.--Lat 39°35'40", long 105°58'19", in $NE_{\overline{u}}^{\frac{1}{4}}NE_{\overline{u}}^{\frac{1}{4}}$ sec.26, T.5 S., R.77 W., on right bank 0.7 mile upstream from mouth and 4.7 miles southeast of Dillon.

Drainage area .-- 8.80 sq mi.

Gage .-- Recording. Altitude of gage is 9,350 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 28 cfs.

Remarks. -- No known diversion above station. Peaks are principally from snowmelt. Base for partial-duration series, 35 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	May 28, 1958 June 5, 1958	2.60 2.75	57 90	1961	July 31, 1961	1.95	18
1959	June 9, 1959	2.13	36	1962	May 12, 1962 June 6, 1962	2.26 2.21	42 35
1960	June 5, 1960	2.14	36	<u> </u>			

480. Snake River at Dillon, Colo.

Location.--Lat 39°36'45", long 106°02'30", in SW $_{\overline{u}}^1$ sec.17,T.5 S., R.77 W., on left bank 0.6 mile upstream from mouth and 1 mile east of Dillon.

Drainage area. -- 92 sq mi, approximately.

Gage. -- Nonrecording Oct. 15, 1910, to Sept. 30, 1919; recording thereafter. At site 0.6 mile downstream at different datums prior to Apr. 23, 1953; datum lowered 1.54 ft Oct. 1, 1929. Altitude of gage 1s 8,870 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 810 cfs.

Remarks. -- Diversions for irrigation of about 350 acres. Diversion for power 6 miles above station; water returned to the Blue River just above mouth of Straight Creek. Diversion ranges from 0 to 50 cfs during periods of peak runoff. Peak flows are principally from snowmelt. Base for partial-duration series, 450 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height vear (cfs) vear (cfs) (feet) (feet) 1911 June 6,12,13,14, 2.6 530 1944 June 19, 1944 3.36 563 21, 22, 1911 1945 June 14, 1945 June 25, 1945 480 3.22 June 28, July 5, 1912 3.0 540 3.36 553 1912 1946 June 10, 1946 3.40 575 1913 May 26, June 13, 2.05 364 1947 June 8, 1947 18, 1913 3.73 707 June 20, 1947 3.99 3.73 828 June 29, 1947 1914 June 16, 1914 3.3 1,040 696 1948 May 22, 1948 3.27 505 1915 June 21, 1915 2.6 660 June 3, 1948 7, 1948 3.68 729 June 3.48 646 1916 June 14 16 1916 2.2 430 June 17, 1949 June 22, 1949 July 7, 1949 1949 3.76 746 1917 June 24, 1917 2.9 840 3.71 716 3.67 600 1918 June 15, 1918 3.1 1.170 1950 June 7, 1950 3.38 574 1919 May 28, 1919 2.0 425 June 11, 1950 June 16, 1950 3.56 673 3.57 678 1930 May 30, 1930 June 12, 1930 3.34 507 3.80 780 1951 May 3.08 489 June 20, 1951 4.02 948 1931 June 7, 1931 3.56 641 July 16, 1951 July 28, 1951 3.42 596 3.36 563 1932 June 15, 1932 3.55 635 1952 June 10, 1952 4.89 1,170 1933 June 1, 1933 June 19, 1933 July 6, 1933 3.68 754 1,010 4.07 3.37 1953 June 2, 1953 June 13, 1953 3.97 512 616 4.58 896 1934 May 20, 1934 3.17 437 1954 May 19, 1954 3,35 217 1935 June 13, 1935 4.25 1,200 1955 June 8, 1955 3.79 411 June 21, 1935 July 3, 1935 3.45 618 3.40 585 1956 May 25, 1956 June 2, 1956 4.02 563 4.49 873 1936 May 30, 1936 June 13, 1936 3.75 825 3.65 755 1957 June 6, 1957 570 June 13, 1957 3.86 498 1937 June 25, 1937 3.35 556 June 20, 1957 4.01 602 June 28, 1957 4.59 887 1938 June 5, 1938 3.75 765 July 13, 1957 July 29, 1957 June 12, 4.17 706 June 12, 1938 June 21, 1938 3.82 3.92 814 3.63 461 884 1958 May 26, 1958 June 5, 1958 4.32 745 1939 May 22, 1939 June 4, 1939 3.45 580 4.32 706 3.38 539 1959 9, 1959 June 3.89 479 1940 June 2, 1940 3.27 460 1960 Jan. 18, 1960 a4.39 1941 June 24, 1941 3.57 618 June June 4, 1960 June 17, 1960 628 4.10 4.07 622 1942 June 11, 1942 June 18, 1942 3.45 585 3.43 546 1961 July 31, 1961 3.79 403 1943 June 9, 1943 June 22, 1943 3.36 3.30 508 1962 Dec. 17, 1961 June 14, 1962 a5.16 475 3.89 479 a Backwater from ice.

500. Tenmile Creek at Frisco, Colo.

Location. --Lat 39°34'30", long 106°06'35", in sec.34, T.5 S., R.78 W., 100 ft upstream from bridge on U.S. Highway 6, 200 ft upstream from North Fork, and half a mile west of Frisco.

Drainage area. -- 79 sq mi, approximately.

Gage. -- Nonrecording July 17, 1942, to Apr. 1, 1943, at site 85 ft upstream at datum 0.66 ft higher; recording thereafter. Datum of gage is 9,099.32 ft above mean sea level, unadjusted.

Stage-discharge relation .-- Defined by current-meter measurements below 740 cfs.

Bankful stage .-- 7 ft.

Remarks. -- Flow partly regulated by Robinson Reservoir (capacity, 2,520 acre-ft).

A transmountain diversion above station, Fremont Pass ditch, exported water to Arkansas River basin prior to August 1943. Other diversions for irrigation above station are of little significance. Diversion and regulation do not significantly affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 9, 1943	3.25	635	1948	June 2, 1948	3,28	1,080
1944	June 9, 1944	3.27	643	1949	May 28, 1949	2.83	704
1945	June 14, 1945	3.09	567		June 13, 1949 June 16, 1949 July 6, 1949	3.06 3.26	888 1,060
1946	June 5, 1946	3.17	605			2.75	640
1947	May 9, 1947 June 8, 1947 June 19, 1947	2.58 3.09 3.13	639 1,050 1,080	1950	May 23, 1950 June 2, 1950 June 6, 1950 June 11, 1950	2.88 3.00 3.40 3.30	760 920 1,260 1,120
1948	May 20, 1948	3.43	1,200				

501. Tenmile Creek below North Fork, at Frisco, Colo.

<u>Location</u>.--Lat 39°34'35", long 106°06'30", in $SW_{\frac{1}{4}NE_{\frac{1}{4}}}^{\frac{1}{4}}$ sec.34, T.5 S., R.78 W., on left bank 500 ft downstream from North Fork, 800 ft downstream from bridge on U.S. Highway 6, and 0.6 mile west of Frisco.

Drainage area. -- 93.3 sq mi.

Gage. -- Recording. Altitude of gage is 9,090 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 940 cfs.

Remarks.--Natural flow of stream affected by a few small diversions above station and transbasin diversion from Robinson Reservoir (capacity, 2,520 acre-ft) in Eagle River basin. Diversions do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 700 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	May 28, 1958 June 5, 1958	5.37 5.30	1,260 1,200	1961	May 31, 1961	4.96	688
1959	June 8, 1959 June 15, 1959	5.07 4.80	996 780	1962	May 12, 1962 June 4, 1962 June 13, 1962 June 21, 1962	4.89 4.81 5.02 5.00	720 70 4 848 752
1960	June 4, 1960 June 17, 1960	5.34 5.30	1,010		Table 21, 1502	0.00	102

505. Tenmile Creek at Dillon, Colo.

Location. --Lat 39°36'45", long 106°03'15", in sec.18, T.5 S., R.77 W., on left bank at Dillon, 250 ft downstream from bridge on U.S. Highway 6 and 600 ft upstream from mouth.

Drainage area. -- 113 sq mi.

Gage.--Nonrecording Oct. 15, 1910, to Sept. 30, 1919; recording thereafter.
Oct. 26, 1929, to Aug. 4, 1939, at site 250 ft upstream at different datum.
Datum of gage is 8,817.97 ft above mean sea level, unadjusted.

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 1,000 cfs. <u>Bankfull stage</u>.-- $6\frac{1}{2}$ ft.

Remarks.--Diversions for irrigation of about 200 acres of hay meadows. Normal flow of stream affected by transbasin diversion from Robinson Reservoir (capacity, 2,520 acre-ft) in Eagle River basin. Transmountain diversion by Fremont Pass ditch prior to August 1943. Diversion and regulation probably substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 700 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 18, June 2,	4.5	1,160	1943	June 9, 1943	4.20	790
1912	1911 June 10, 1912	4.6	1,310	1944	May 30, 1944 June 9, 1944	3.94 4.15	71 4 810
1913	May 26, 1913	4.5	1,160	1945	June 13, 1945	4.17	776
1914	June 3, 1914	4.9	1,440	1946	June 6, 1946	4.34	870
1915	June 21, 1915	3.6	975	1947	May 9, 1947 June 8, 1947	3.83 4.54	730 1,220
1916	June 12, 1916	3.51	902		June 20, 1947	4.37	1,100
1917	June 16, 1917	4.25	1,530	1948	May 22, 1948 June 2, 1948	4.47 4.38	1,170 1,110
1918	June 11, 1918	4.25	1,610	1949	May 28, 1949	3.77	704
1919	May 21, 1919	3.4	897	1949	June 16, 1949	4.41	1,130
1930	May 30, 1930 June 12, 1930	5.27 5.08	1,400 1,230	1950	May 23, 1950 June 3, 1950 June 6, 1950	3.93 4.18 4.47	791 966 1,170
1931	May 17, 1931 May 25, 1931 June 3, 1931	5.03 5.04 4.73	1,160 1,170 924	1951	June 11, 1950 May 30, 1951	4.48 4.54	1,180
1932	May 22, 1932 June 15, 1932	4.93 4.81	1,080		June 21, 1951 June 25, 1951	4.77 4.52	1,270 1,090
1933	June 1, 1933 June 5, 1933	5.82 5.63	2,010 1,820	1952	May 15, 1952 June 8, 1952	3.94 5.27	714 1,300
1934	June 11, 1933 May 9, 1934	5.49 4.42	1,680	1953	May 28, 1953 June 2, 1953 June 13, 1953	4.94 4.88 5.16	1,280 1,240 1,500
1935	June 11, 1935	5.60	1,350	1954	May 20, 1954	3.77	547
1936	May 30, 1936 June 8, 1936	5.29 4.70	1,170 792	1955	June 8, 1955	4.04	676
1937	May 15, 1937	4.68	699	1956	May 25, 1956 June 2, 1956	4.60 4.80	1,000 1,150
1938	June 3, 1938 June 21, 1938	5.42 4.90	1,380 960	1957	June 6, 1957 June 20, 1957	4.88 4.62 5.18	1,280 1,080 1,580
1939	May 22, 1939 May 31, 1939	4.98 4.83	1,030 912		June 28, 1957 July 13, 1957	4.27	829
1940	June 1, 1940	3,86	656	1958	May 28, 1958 June 5, 1958	5.00 5.08	1,310 1,370
1941	May 17, 1941	3.93	654	1959	June 8, 1959 June 15, 1959	4.56 4.35	1,030
1942	May 26, 1942	4.31	824	1960	June 4, 1960	4.38	920
1943	June 1, 1943	4.02	709	1300	June 17, 1960	4.52	1,030

510. Straight Creek near Dillon, Colo.

<u>Location</u>.--Lat 39°38'55", long 106°01'05", in NW $\frac{1}{4}$ sec.4, T.5 S., R.77 W., on left bank 1,000 ft upstream from Laskey Creek and $3\frac{1}{2}$ miles northeast of Dillon.

Drainage area. -- 12.8 sq mi.

Gage.--Recording. Prior to Sept. 22, 1949, at site 150 ft upstream at datum 6.52 ft higher. Datum of gage is 9,386.17 ft above mean sea level, unadjusted.

Stage-discharge relation. -- Defined by current-meter measurements below 2.8 ft. Bankfull stage. -- 3 ft.

 $\underline{\underline{\text{Remarks}}}$.-No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 120 cfs.

			Peak stages a	ınd disch	arges		
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	June 19, 1944	2.23	136	1949	June 16, 1949 June 21, 1949	2.55 2.52	125 135
1945	June 24, 1945	2.19	128		July 6, 1949	2.71	161
1946	June 10, 1946	2.28	141	1950	June 11, 1950 June 17, 1950	2.40 2.34	152 167
1947	June 8, 1947 June 20, 1947	2.33 2.48	131 129	1951	June 21, 1951	2.29	138
1948	June 3, 1948	2.43	122	1952	June 10, 1952	2.44	234

515. Willow Creek near Dillon, Colo.

<u>Location</u>.--Lat 39°39'00", long 106°04'45", in NW $\frac{1}{4}$ sec.1, T.5 S., R.78 W., on right bank at bridge on State Highway 9, 700 ft upstream from mouth and 3 miles northwest of Dillon.

Drainage area. -- 13.5 sq mi.

Gage.--Recording. Datum of gage is 8,691.59 ft above mean sea level, unadjusted.

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 130 cfs. <u>Bankfull stage</u>.-- $2\frac{1}{2}$ ft.

Remarks.--Diversions for irrigation of 50 acres of hay meadows. Peak flows are principally from snowmelt. Base for partial-duration series, 100 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date Date height height (cfs) (cfs) year year (feet) (feet) 1943 June 2, 1943 2.30 1.50 1948 May 21, 1948 June 3, 1948 1.98 105 2.16 141 1944 May 30, 1944 June 21, 1944 2.10 116 104 2.04 1949 June 17, 1949 2.20 138 1945 June 24, 1945 2.10 102 1950 June 6, 1950 June 16, 1950 2.00 111 2.28 166 1946 June 18, 1946 2.08 112 June 21, 1951 June 27, 1951 July 7, 1951 1951 2.35 210 1947 8, 1947 116 2.10 June 180 July 7, 150. Tuly 16, 1951 June 20, 1947 July 2, 1947 2.32 162 2.64 184 2, July 2.11 136 2.01 136 520. Rock Creek near Dillon, Colo.

Location. --Lat 39°43'25", long 106°07'40", in NE_{τ}^{1} sec. 9, T.4 S., R.78 W., on left bank 500 ft upstream from bridge on State Highway 9, a quarter of a mile upstream from mouth, and 9 miles northwest of Dillon.

Drainage area .-- 15.8 sq mi.

Gage.--Recording. Apr. 21, 1943, to Sept. 13, 1950, at site 500 ft downstream at datum 28.76 ft lower. Datum of gage is 8,502.52 ft above mean sea level, unadjusted.

Stage-discharge relation. -- Defined by current-meter measurements below 190 cfs.

Remarks. -- A few small diversions for irrigation of hay meadows; diversion does not affect peak flows. Base for partial-duration series, 160 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height (cfs) (cfs) year vear (feet) (feet) June 1, 1943 June 9, 1943 June 30, 1943 2.32 June 17, 1949 July 25, 1949 200 177 1949 1943 2.44 163 2.40 198 2.34 199 172 1950 June 16, 1950 2.41 1944 May 30, 1944 2.19 157 June 18, 1951 June 21, 1951 260 1951 4.35 June 14, 1945 2.24 188 1945 4.21 248 June 24, 1945 Aug. 1, 1945 2.27 185 228 1952 June 6, 1952 June 15, 1952 163 3.97 3.88 208 1946 June 6, 1946 2.26 182 June 13, 1953 210 1953 4.01 June 8, 1947 June 20, 1947 July 15, 1947 1947 2.33 209 236 1954 May 20, 1954 3.48 107 2.42 2.23 179 Apr. 13, 1955 June 8, 1955 a3.81 1955 21, 1948 7, 1948 1948 2.37 221 3.55 118 June 2.39 227 162 1956 May 25, 1956 3.87 2, 1949 June 11, 1949 2.44 188 June 1956 170

525. Boulder Creek near Dillon, Colo.

<u>Location</u>.--Lat 39°44'15", long 106°08!05", in NW $\frac{1}{4}$ sec.4, T.4 S., R.78 W., on left bank 300 ft upstream from bridge on State Highway 9, 500 ft upstream from mouth, and 10 miles northwest of Dillon.

Drainage_area. -- 9.7 sq mi.

a Backwater from ice.

Gage.--Recording. Datum of gage is 8,456.79 ft above mean sea level, unadjusted.

Stage-discharge relation. -- Defined by current-meter measurements below 130 cfs.

Remarks.--Nine small diversions above station for irrigation of 40 acres of hay meadows; diversions do not affect peak flows. Peak flows are principally from snowmelt. Base for partial duration series, 100 cfs.

Peak stages and discharges Gage Gage Water Water Discharge Discharge Date Date height height year (cfs) vear (cfs) (feet) (feet) May 29, 1943 June 2, 1943 June 10, 1943 June 21, 1943 June 30, 1943 1943 2.53 1947 July 15, 1947 106 1.41 2.67 173 2.50 134 1948 May 21, 1948 June 8, 1948 2.87 108 2.97 255 2.97 126 2.67 173 June 17, 1949 June 27, 1949 July 6, 1949 July 25, 1949 1949 3.19 136 3.05 3.20 1944 June 24, 1944 2.61 154 106 131 1945 June 24, 1945 2.66 166 3.04 110 2.82 1946 June 9, 1946 159 1950 June 17, 1950 3.23 118 June 8, 1947 June 20, 1947 2.72 1947 1951 June 18, 1951 June 21, 1951 146 210 3.43 166 3.47 232 July 9, 1947 104

530. Slate Creek near Dillon, Colo.

<u>Location</u>.--Lat 39°46'55", long 106°10'05", in NW $\frac{1}{u}$ sec.19, T.3 S., R.78 W., on left bank a quarter of a mile upstream from State Highway 9, 2,000 ft upstream from mouth, and 13 miles northwest of Dillon.

Drainage area .-- 16.8 sq mi.

Gage.--Recording. Datum of gage is 8,227.70 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs. Bankfull stage.--l- ft.

Remarks.--Diversions for irrigation of 490 acres of hay meadows. Diversions do not affect peak flows substantially. Peak flows are principally from snowmelt. Base for partial-duration series, 120 cfs.

		1	Peak stages a	and disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Itscharge (cfs)
1943	June 2, 1943 June 30, 1943	1.95 2.25	138 203	1949	July 7, 1949 July 25, 1949	2.03 1.91	147 126
1944	June 25, 1944	1.81	120	1950	June 12, 1950	2.01	142
1945	May 22, 1945	2.66	288	1951	May 28, 1951	1.88	122
1946	June 18, 1946	2.19	160		June 18, 1951 June 21, 1951	2.40 2.49	200 246
1947	June 20, 1947 July 9, 1947	2.24 1.95	188 133	1952	June 11, 1952 Aug. 11, 1952	2.14 1.74	223 129
1948	May 22, 1948 June 3, 1948	2.18 2.13	176 166	1953	June 13, 1953	2.30	234
1949	June 17, 1949	2.02	146	1954	May 20, 1954	1.55	67

535. Blue River above Green Mountain Reservoir, Colo.

<u>Location</u>.--Lat 39°49'55", long 106°13'20", in S_2^1 sec.34, T.2 S., R.79 W., on left bank 300 ft north of State Highway 9, just upstream from high-water line of Green Mountain Reservoir, 1.3 miles downstream from Brush Creek, and 18 miles southeast of Kremmling.

Drainage area. -- 514 sq mi.

Gage.--Recording. Datum of gage is 7,946.56 ft above mean sea level,
 unadjusted.

Stage-discharge relation. -- Defined by current-meter measurements below 4,200 cfs.

Remarks. -- Many small diversions for irrigation of 1,740 acres of hay meadows. Diversions do not affect peak flows substantially. Peak flows are principally from snowmelt. Base for partial-duration series, 2,600 cfs.

Peak stages and discharges Gage Gage Discharge (cfs) Water Discharge Water Date height Date height (cfs) vear vear (feet) (feet) 3.91 3,190 June 7, 1950 June 17, 1950 1944 June 10, 1944 3.75 2,540 1950 4.12 3,260 1945 June 25, 1945 3.78 2,670 May 31, 1951 June 21, 1951 June 26, 1951 3.83 2,890 1951 2,820 4,520 3,360 1946 June 6, 1946 3.88 4.68 4.09 1947 June 8, 1947 June 21, 1947 4.22 3,420 4.93 5,020 4.36 3,750 1952 June 11, 1952 May 23, 1948 June 4, 1948 May 29, 1953 June 14, 1953 3.82 2,910 1948 3.96 3,160 1953 4,400 4.57 4.09 3,360 1949 June 18, 1949 July 7, 1949 3,630 1954 May 21, 1954 2.54 1,140 2,690 3.79

Peak stages and discharges of Blue River above Green Mountain Reservoir, Colo .-- Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	June 9, 1955	2.95	1,590	1958	June 6, 1958	4.08	3,680
1956	May 26, 1956 June 3, 1956	3.75 4.07	2,760 3,150	1959	June 16, 1959	3.56	2,640
		}		1960	June 18, 1960	3.60	2,780
1957	June 8, 1957 June 21, 1957 June 29, 1957	3.93 3.64 4.43	3,330 2,780 4, 280	1961	June 1, 1961	2.94	1,730
	July 14, 1957	3.73	2,950	1962	Nov. 5, 1961 June 15, 1962	a6.93 3.47	2,480
1958	May 29, 1958	4.14	3,800	1			

a Backwater from ice.

540. Black Creek below Black Lake, near Dillon, Colo.

Location. -- Lat 39°48'10", long 106°15'50", in sec.8, T.3 S., P.79 W., three-quarters of a mile downstream from Black Lake and 17 miles northwest of Dillon.

Drainage area .-- 15.2 sq mi.

Gage.--Recording. Datum of gage is 8,740 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 260 cfs.

 $\underline{\text{Remarks.-No}}$ diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 160 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 30, 1943 June 2, 1943	4.10 3.90	275 245	1946	June 23, 1946		175
	July 1, 1943	4.72	384	1947	May 9, 1947 June 9, 1947	3.40 3.82	178 2 54
1944	May 30, 1944	3.55	186	H	June 20, 1947	4.10	310
	June 11, 1944	3.65	202	<u> </u>	July 2, 1947	3.66	225
	June 16, 1944	3.40	162	1	1		
	June 25, 1944	3.68	207	1948	May 21, 1948	3.74	238
	July 5, 1944	3.58	191	1	June 3, 1948 June 8, 1948	3.83 3.66	257 222
1945	May 27, 1945	3.35	160	1	July 29, 1948	3.77	244
	June 14, 1945	3.78	230	1	1		
	June 25, 1945	3.93	257	1949	June 13, 1949	3.60	254
	July 3, 1945	3.66	210		June 18, 1949	3.73	285
	Aug. 1, 1945	3.45	176		July 4, 1949 July 25, 1949	3.65 3.94	266 338
1946	June 17, 1946	4.51	366		, ,		

545. Black Creek above Green Mountain Reservoir, Colo.

Location.--Lat 39°51'15", long 106°15'10", in NE $_{\star}^{1}$ sec.29, T.2 S., R.79 W., 30 ft upstream from bridge on State Highway 9, 400 ft upstream from highwater line of Green Mountain Reservoir, and 16 miles southeast of Kremmling.

Drainage area. -- 18.2 sq mi.

Gage.--Recording. Datum of gage is 7,960 ft above mean sea level (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 320 cfs.

Remarks.--Diversions above station for irrigation of 20 acres of hay meadows.

Peak flows are principally from snowmelt. Base for partial-duration series, 190 cfs.

Peak stages and discharges of Black Creek above Green Mountain Reservoir, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	June 25, 1944	2.24	184	1950	June 7, 1950 June 17, 1950	2.09 2.12	212 218
1945	June 23, 1945	2.48	210	1951	June 18, 1951	1.85	315
1946	June 18, 1946	2.63	230		June 21, 1951 June 26, 1951	1.55 1.04	390 234
1947	June 9, 1947 June 21, 1947 July 9, 1947	2.22 2.46 2.19	224 266 224		July 5, 1951 July 17, 1951 July 21, 1951	1.09 .99 .98	247 221 199
1948	May 21, 1948 June 3, 1948 July 29, 1948	2.07 2.03 2.02	211 205 203	1952	June 8, 1952 June 20, 1952 Aug. 11, 1952	1.90 1.47 1.58	388 225 255
1949	June 13, 1949 June 17, 1949 July 4, 1949 July 25, 1949	2.08 2.22 1.88 1.97	216 244 216 233	1953	May 29, 1953 June 13, 1953 July 11, 1953 Aug. 2, 1953	1.41 1.68 1.41 1.24	207 368 274 216

550. Otter Creek above Green Mountain Reservoir, Colo.

Location.--Lat 39°51'10", long 106°16'00", in $NW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.29, T.2 S., R.79 W., on right bank 20 ft upstream from State Highway 9, 1,000 ft upstream from highwater line of Green Mountain Reservoir, and 16 miles southeast of Kremnling.

Drainage area. -- 9.4 sq mi, approximately.

 $\underline{\text{Gage.--Recording}}$ and concrete control. Datum of gage is 7,980 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 60 cfs.

 $\frac{\text{Remarks.--Diversions for irrigation of 100 acres of hay meadows. Peak flows are principally from snowmelt. Base for partial-duration series, 30 cfs.}$

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	June 1, 1944 June 10, 1944 June 22, 1944	1.03 .98 .93	34 34 34	1949	June 4, 1949 June 17, 1949 July 25, 1949	0.97 1.17 .92	41 63 35
1945	June 25, 1945	.91	29	1950	June 3, 1950 June 7, 1950	1.14	47 44
1946	June 6, 1946 June 18, 1946	1.10 1.13	46 49		June 13, 1950	1.10	41
1947	May 9, 1947 June 9, 1947 June 21, 1947	.95 1.11 1.23	32 45 57	1951	May 28, 1951 June 18, 1951 June 21, 1951	.95 1.32 1.59	32 69 100
1948	May 22, 1948 May 29, 1948	1.30 1.11	56 41	1952	May 16, 1952 June 6, 1952	1.07 1.51	42 91
	June 3, 1948 June 8, 1948	1.06 1.10	37 40	1953	May 28, 1953 June 2, 1953 June 13, 1953	1.12 .98 1.29	47 33 66
1949	May 29, 1949	.95	38		June 19, 1953	.97	31

555. Cataract Creek above Green Mountain Reservoir, Colo.

<u>Location</u>.--Lat 39°51'00", long 106°17'25", in $NE_{\overline{k}}^{1}$ sec.25, T.2 S., R.80 W., on right bank at Lawson Ranch, 1 mile upstream from high-water line of Green Mountain Reservoir and 16 miles southeast of Kremmling.

Drainage area. -- 14.4 sq mi.

<u>Gage</u>.--Recording. Datum of gage is 8,320 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 250 cfs.

Remarks.--Small diversions for irrigation of hay meadows do not substantially affect maximum flows. Peak flows are principally from snowmelt. Base for partial-duration series, 180 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 31, 1944	2.01	218	1949	June 18, 1949	2.08	250
1945	June 24, 1945	2.23	291	1950	June 17, 1950	2.01	220
1946	June 8, 1946	2.45	333	1951	May 29, 1951 June 18, 1951	2.04	182 235
1947	May 9, 1947 June 9, 1947	2.35 2.13	305 238		June 21, 1951	2.69	416
	June 21, 1947 June 30, 1947	2.35 2.15	308 244	1952	June 10, 1952	2.49	312
1948	May 22, 1948	1.88	201	1953	May 29, 1953 June 14, 1953	2.04 2.25	194 253

560. Blue River near Kremmling, Colo.

<u>Location.</u>--Lat 39°52'20", long 106°17'25", in $SE_{\overline{u}}^1$ sec.13, T.2 S., R.80 W., at former highway bridge, half a mile downstream from Cataract Creek and 14 miles south of Kremmling.

Drainage area. -- 560 sq mi.

<u>Gage.</u>--Nonrecording. Datum of gage is 7,780 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 3,300 cfs.

Remarks.--Many small diversions for irrigation probably do not substantially affect maximum flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 9, 1905	4.45	4,860	1907 1908	July 1, 1907 June 12, 1908	4.75 4.4	5,050 3,520
,1906	June 14, 1906	5.2	7,820				

575. Blue River below Green Mountain Reservoir, Colo. (Published as "below Green Mountain Reservoir, near Kremmling" 1938-43)

<u>Location</u>.--Lat 39°52'50", long 106°20'00", in NE $\frac{1}{4}$ sec.15, T.1 S., R.80 W., on left bank 0.3 mile upstream from Elliot Creek, 0.3 mile downstream from Green Mountain Dam, and 13 miles southeast of Kremmling.

<u>Drainage area.</u>--599 sq mi (includes 15.4 sq mi of Elliot Creek above diversion for Elliot Creek feeder canal). Prior to 1952, drainage area was 623 sq mi.

Gage.--Recording. At site 3.7 miles downstream at different datum prior to Oct. 1, 1951. Datum of gage is 7,682.66 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation, -- Defined by current-meter measurements below 3.000 cfs.

Remarks. -- Diversions for irrigation of about 5,000 acres. Flow regulated by Green Mountain Reservoir since Nov. 16, 1942. Prior to Nov. 16, 1942, flood peaks were probably not affected by diversion. Base for partial-duration series, 2,800 cfs.

Peak stages and discharges

	reak budges and utscharges											
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)					
1938	June 4, 1938 June 22, 1938	5.93 5.83	4,000 3,870	1950	June 15, 1950	4.17	1,860					
	1		<u> </u>	1951	July 17, 1951	4.60	2,310					
1939	May 23, 1939 June 1, 1939	5.33 5.24	3,190 3,060	1952	June 21, 1952	8.62	2,620					
1940	June 2, 1940	4.98	2,800	1953	June 2, 1953	7.33	1,830					
1941	June 19, 1941	5.17	3,010	1954	Sept. 7, 1954	7.30	1,810					
1942	June 7, 1942 June 19, 1942	5.60 5.51	3,570 3,450	1955	Oct. 5, 1954	6.76	1,490					
	June 15, 1542	3.31	3,430	1956	June 1, 1956	7.36	1,850					
1943	June 30, 1943	5.28	3,150		1		1					
1944	Oct. 29, 1943	4.04	1,680	1957	July 8, 1957	10.13	3,520					
	,			1958	May 19, 1958	7.63	1,920					
1945	Aug. 7, 1945	4.22	1,830	1959	May 15, 1959	7.64	1,920					
1946	June 18, 1946	4.25	1,860	1333	May 15, 1959	7.04	1,320					
1947	June 30, 1947	5.57	3,490	1960	May 25, 1960	7.26	1,640					
1341	June 30, 1947	5.57	3,490	1961	June 2, 1961	7.61	1,910					
1948	June 14, 1948	4.67	2,300		1	l .	•					
1949	June 24, 1949	5.10	2,870	1962	Mar. 14, 1962	4.71	1,790					

COLORADO RIVER MAIN STEM

580. Colorado River near Kremmling, Colo.

<u>Location</u>.--Lat 40°02'12", long 106°26'22", in $NE_{\pm}^{1}SW_{\pm}^{1}$ sec.23, T.IN., K.81 W., at upstream end of Gore Canyon, 3 miles southwest of Kremmling (5 miles downstream) and 3.8 miles downstream from Blue River.

Drainage area. -- 2,360 sq mi, approximately.

Gage.--Nonrecording prior to July 27, 1910. At datum 0.80 ft lower prior to Oct. 18, 1906. Recording after July 27, 1910, supplemented in winter by non-recording gage. Datum of gage is 7,301.32 ft above mean sea level (Lenver Northwestern and Pacific Railway bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 14,000 cfs.

Remarks. -- Natural flow of stream affected by transmountain diversions and diversions for irrigation of about 40,000 acres. Diversions probably do not substantially affect flood peaks. Peak flows are principally from srowmelt. Base for partial-duration series, 7,900 cfs.

Peak stages and discharges of Colorado River near Kremmling, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 4, 1905	16.05	12,400	1913	June 1, 1913	12.50	7,860
1906	June 14, 1906	15,40	11,800	1914	June 2, 1914 June 14, 1914	18.60 16.07	16,400 12,750
1907	July 2, 1907	15.85	12,200	1915	June 21, 1915	12.95	8,410
1908	June 17, 1908	11.5	6,690	1916	June 12, 1916	_	8,100
1909	June 20, 1909	18.2	15,700	1917	May 19, 1917	12.86	8,680
1910	June 3, 1910	12.5	7,920	131,	June 19, 1917	17.9	15,200
1911	June 9, 1911	12.87	8,830	1918	May 26, 1918 June 15, 1918	12.9 19.0	8,680 16,800
1912	May 27, 1912 June 7, 1912 June 29, 1912	14.24 21.80 15.50	10,100 21,500 11,900	1962	May 13, 1962	12.59	6,310

PINEY RIVER BASIN

585. Piney River below Piney Lake, near Minturn, Colo.

<u>Location</u>.--Lat 39°42'30", long 106°25'35", in $W_{\frac{1}{2}}$ sec.14, T.4 S., R.81 W., on left bank $1\frac{1}{2}$ miles upstream from Dickson Creek, $1\frac{3}{4}$ miles downstream from Piney Lake, and 8 miles north of Minturn.

Drainage area .-- 13.0 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 9,145.25 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation .-- Defined by current-meter measurements below 300 cfs.

 $\underline{\underline{Remarks}}$.--No diversion above station. Peak flows principally from snowmelt. $\underline{\underline{Base}}$ for partial duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 22, 1948 June 3, 1948	5.10 4.97	260 229	1951	June 18, 1951 June 26, 1951 July 5, 1951	5.08 4.95 4.83	324 285 255
1949	May 30, 1949 June 12, 1949	4.66 5.07	160 253	1	July 8, 1951	4.75	231
	June 17, 1949 July 4, 1949 July 25, 1949	5.23 4.83 4.73	291 1 97 175	1952	May 5, 1952 June 11, 1952 June 30, 1952	4.56 5.47 4.57	151 396 159
1950	June 2, 1950 June 6, 1950 June 17, 1950	4.86 5.12 5.09	210 284 272	1953	May 29, 1953 June 13, 1953	4.93 5.35	215 323
1951	May 29, 1951	4.87	261	1954	May 22, 1954	4.65	158

595. Piney River near State Bridge, Colo.

Location. -- Lat 38°48', long 106°35', in sec.16, T.3 S., R.82 W., on left bank just downstream from private bridge at Perry Olsen Ranch, just downstream from Rock Creek, and 6 miles southeast of State Bridge.

Drainage area .-- 82.6 sq mi.

Gage.--Nonrecording prior to July 29, 1944; recording thereafter. At datum 2.38 ft higher prior to Oct. 24, 1947. Datum of gage is 7,272.35 ft above mean sea level, unadjusted.

Stage-discharge relation .-- Defined by current-meter measurements below 960 cfs.

Remarks.--Diversions for irrigation of about 400 acres of hay meadows. Peak flows principally from snowmelt. Base for partial-duration series, 520 cfs.

Peak stages and discharges of Piney River near State Bridge, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 26, 1945	2.58	516	1954	May 22, 1954	4.01	234
1946	June 7, 1946	2.39	576	1955	June 9, 1955	4.24	358
1947	May 9, 1947 June 4, 1947	2.26 2.04	624 530	1956	May 22, 1956	5.12	808
	June 8, 1947 June 21, 1947	2.36	644 604	1957	June 7, 1957 June 21, 1957 June 29, 1957	5.16 4.85 5.05	1,080 730 850
1948	May 19, 1948	5.29	943	1958	May 12, 1958	4.62	545
1949	May 29, 1949 June 13, 1949	4.88 4.95	525 562		May 28, 1958	5.26	898
1950	June 6, 1950	4.94	490	1959	June 8, 1959	4.82	622
1951	May 27, 1951 June 21, 1951	5.01 5.14	525 590	1960	June 5, 1960 June 8, 1960	4.82 4.74	575 540
1952	May 5, 1952	4.96	520	1961	May 30, 1961	4.58	475
	June 8, 1952	5.61	1,110	1962	May 12, 1962 June 14, 1962	5.06 4.86	754 622
1953	May 28, 1953 June 13, 1953	5.21 4.93	880 706		June 22, 1962	4.79	590

ROCK CREEK BASIN

605. Rock Creek near Toponas, Colo.

Location.--Lat 40°02'28", long 106°39'19", in $NW_{\overline{u}}^{\overline{u}}$ sec.24, T.1 N., R.83 W., on right bank 0.1 mile upstream from Horse Creek, three-quarters of a mile downstream from Shoe and Stocking Creek, and 8 miles east of Toponas.

Drainage area. -- 48 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,544 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 360 cfs.

Remarks.--Diversions above station for irrigation of about 400 acres of hay meadows. Diversions do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 31, 1953	4.03	308	1959	May 13, 1959 May 22, 1959	4.00 3.78	330 274
1954	May 6, 1954	2.92	88		June 7, 1959 June 28, 1959	3.68 3.72	254 252
1955	Apr. 26, 1955	3.98	285	1000	-		
1956	May 6, 1956 May 21, 1956	3.56 4.05	22 4 3 18	1960	Apr. 21, 1960 May 13, 1960 May 23, 1960 May 31, 1960	3.74 3.64 3.59 3.66	256 236 226 240
1957	May 10, 1957 May 19, 1957 June 6, 1957 June 13, 1957	4.60 3.63 4.77 4.72	404 206 443 431	1961	May 11, 1961 May 30, 1961	3.91 3.77	29 4 258
	June 20, 1957	4.75	438	1962	Apr. 18, 1962 Apr. 27, 1962	a5.49 4.02	- 318
1958	May 7, 1958 May 12, 1958 May 28, 1958	3.72 3.82 4.27	266 284 365		May 12, 1962 June 1, 1962	4.80 4.05	482 324

a Backwater from ice.

609. Catamount Creek near Burns, Colo.

Location.--Lat 39°51', long 106°48', in center of sec.33, T.2 S., R.84 W., on right bank three-quarters of a mile upstream from unnamed tributary, limites upstream from mouth, and 5 miles southeast of Burns.

Drainage area. -- 5.88 sq mi.

Gage .-- Recording. Altitude of gage is 7,500 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 21 cfs.

Remarks.--Two small diversions above station do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 15 cfs.

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1956	May 20, 1956	3.40	16	1959	May 16, 1959	3.11	8.8				
1957	May 9, 1957 June 4, 1957 June 20, 1957	3.86 3.61 3.39	38 33 27	1960	May 13, 1960 June 4, 1960	3.20 3.12	19 17				
1958	May 28, 1958	3.32	22	1961	May 10, 1961	3.02	14				

CABIN CREEK BASIN

610. Sunnyside Creek near Burns, Colo.

Location. -- Lat 39°58', long 106°57', in sec.17, T.1 S., R.85 W., on left bank 6 ft downstream from bridge, 7 miles upstream from mouth, and 7½ miles northwest of Burns.

Drainage area. -- 10 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,220 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 81 cfs.

Remarks.--Two small diversions above station for irrigation of 50 acres do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 30 cfs.

Peak stages and discharges Gage Gage Discharge Discharge (cfs) Water height Water Date Date height (cfs) year (feet) year (feet) 10, 1957 3.88 62 1957 21, 1953 27, 1953 3.69 3.74 35 39 May 1953 Мау 19, 1957 28, 1957 3.68 55 May May 110 May 4.03 3.65 16 1954 Apr. 24, 1954 3.88 1958 May 6, 1958 11, 1958 3.80 59 41 May 7. 1955 3.77 1955 Mav 32 1956 Mav 8, 1956 3.64

645. Homestake Creek near Red Cliff, Colo. (Published as "at Red Cliff" October 1910 to September 1916)

Location. -- Lat 39°28'25", long 106°22'00", in sec.6, T.7 S., R.80 W., at downstream side of Forest Service highway bridge, 3 miles upstream from mouth and 3 miles south of Red Cliff.

Drainage area .-- 58.9 sq mi.

<u>Gage</u>.--Nonrecording at three sites $2\frac{1}{4}$ to $2\frac{3}{4}$ miles downstream at different datums prior to Sept. 30, 1918; recording thereafter. Datum of gage is 8,783 ft above mean sea level (river-profile map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below} \\ 1,060 \text{ cfs.}$

Remarks.--Small diversions for irrigation of a few acres. Diversion should not substantially affect peak flows. Peak flows principally from snowmelt. Base for partial-duration series, 710 cfs. Only annual peaks are shown prior to 1944.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911 1912	June 15, 1911 June 6, 1912	4.0 4.0	940 950	1951	June 21, 1951	3.96	866
1913 1914	May 30, 1913 June 3, 1914	3.5 4.01	710 940	1952	June 11, 1952	4.17	1,050
	1	l	1	1953	May 28, 1953	3.87	839
1916 1917	June 13, 1916 June 16, 1917	3.17 3.6	658 9 4 0		June 13, 1953	4.18	1,060
1918	June 24, 1918	6.2	1,300	1954	May 19, 21,1954	3.21	476
1944	May 31, 1944	3.74	754	1955	June 12, 1955	2.98	552
1945	June 23, 1945	3.68	708	1956	May 24, 1956 June 3, 1956	3.58 3.62	839 893
1946	June 7, 1946	3.87	822		· ·		
1947	June 9, 1947 June 20, 1947	3.85 3.92	7 9 2 827	1957	June 9, 1957 June 29, 1957 July 18, 1957	3.60 4.01 3.66	917 1,120 872
1948	May 22, 1948 June 3, 1948	3.80 3.82	800 812	1958	May 28, 1958 June 6, 1958	3.56 4.00	830 1,120
1949	June 13, 1949 June 17, 1949	3.88 3.90	808 820	1959	June 8, 1959	3.40	835
1950	June 2, 1950	_	720	1960	June 8, 1960 June 18, 1960	3.33 3.24	835 828
1550	June 6, 1950 June 12, 1950	- -	800 770	1961	May 29, 1961	3.09	604
1951	May 29, 1951	3.81	776	1962	June 14, 1962	3.27	712

651. Cross Creek near Minturn, Colo.

Location.--Lat 39°34'05", long 106°24'45", in $SW_{\overline{4}}^1$ sec.36, T.5 S., R.81 W., on right bank 0.4 mile upstream from mouth and $1\frac{1}{2}$ miles southeast of Minturn.

Drainage area. -- 33.5 sq mi.

<u>Gage.</u>--Nonrecording at site 0.3 mile downstream at different datum prior to July 18, 1956; recording thereafter. Altitude of gage is 7,990 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 630 cfs.

Remarks.--Diversion above station for municipal supply of Minturn does not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 400 cfs.

Peak stages and discharges of Cross Creek near Minturn, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 23, 1956	2,20	510	1959	June 20, 1959	5.05	514
1957	June 8, 1957 June 30, 1957 July 18, 1957	4.80 5.45 5.54	475 754 722	1960	June 8, 1960 June 18, 1960	5.09 5.25	546 654
1958	May 29, 1958	4.90	468	1961	May 30, 1961	4.67	450
1959	June 6, 1958 June 9, 1959	5.17 4.79	614 546	1962	June 14, 1962 June 20, 1962 July 1, 1962	4.71 4.69 4.66	454 450 468

655. Gore Creek at upper station, near Minturn, Cclo.

Location.--Lat 39°37'40", long 106°16'30", in NW_{1}^{1} sec.18, T.5 S., R.79 W., on left bank 120 ft downstream from bridge on U.S. Highway 6, half a mile upstream from Black Gore Creek, and $8\frac{1}{2}$ miles northeast of Minturn.

Drainage area .-- 14.4 sq mi.

<u>Gage</u>.--Recording. Datum of gage is 8,620 ft above mean sea lev∈1 (from topo-graphic map).

Stage-discharge relation. -- Defined by current-meter measurements below 260 cfs.

 $\frac{Remarks}{Base}$.-No diversion above station. Peak flows principally from snowmelt. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 21, 1948 June 8, 1948	5.47 5.46	307 280	1951	June 27, 1951 July 4, 1951	5.71 5.52	391 363
1949	June 12, 1949 June 16, 1949 June 21, 1949	5.61 5.71 5.69	304 326 322	1952 1953	June 10, 1952 May 28, 1953	6.58 3.49	588 202
	July 5, 1949	5.31	213		June 13, 1953	3.60	430
1950	June 1, 1950 June 6, 1950	5.38 5.68	206 275	1954	May 20, 1954	3.10	320
	June 16, 1950	5.92	331	1955	June 12, 1955	3.10	158
1951	May 28, 1951 June 18, 1951	5.53 6.65	290 514	1956	June 2, 1956	2.6	350

660. Black Gore Creek near Minturn, Colo.

<u>Location</u>.--Lat 39°35'45", long 106°15'50", in $NW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.29, T.5 S., R.79 W., on right bank 300 ft south of U.S. Highway 6, half a mile upstream from Timber Creek, $2\frac{1}{2}$ miles upstream from mouth, and 9 miles east of Minturn.

Drainage area.--11.8 sq mi.

 $\underline{\texttt{Gage.}\text{--Recording.}}$ Datum of gage is 9,180 ft above mean sea level (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 300 cfs.

Remarks.--No diversion above station. Peak flows are from snowmelt. Base for partial-duration series, 150 cfs.

Peak stages and discharges of Black Gore Creek near Minturn, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 22, 1948 June 2, 1948	5.15 4.99	300 262	1952	June 7, 1952	5.42	365
	1	ļ		1953	May 28, 1953	4.73	204
1949	May 29, 1949 June 11, 1949	4.54 4.84	162 227		June 12, 1953	5.00	262
	_			1954	May 17, 1954	4.05	94
1950	May 23, 1950	4.65	188				
	June 1, 1950 June 5, 1950	4.89 4.87	240 235	1955	May 14, 1955	4.31	147
	-			1956	Mar. 31, 1956	a5.70	-
1951	May 27, 1951 June 19, 1951	4.77 4.83	224 234		May 22, 1956	-	b200

a Backwater from ice.

665. Gore Creek near Minturn, Colo.

<u>Location</u>.--Lat 39°36'55", long 106°26'25", in $S\Xi_{1}^{L}$ sec.15, T.5 S., R.81 W., on right bank half a mile upstream from mouth and 2 miles north of Minturn.

Drainage area. -- 100 sq mi.

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Remarks.--Diversions for irrigation of about 600 acres. Diversion should not substantially affect peak flows. Peak flows are from snowmelt. Base for partial-duration series, 900 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 13, 1945 June 24, 1945	4.39 4.45	1,090 1,140	1950	June 11, 1950	4.43	1,130
1946	June 6, 1946	4.47	1,010	1951	May 28, 1951 June 18, 1951	4.40 4.76	1,100 1,370
1947	June 8, 1947 June 20, 1947	4.75 4.60	1,340 1,240	1952	June 7, 1952	5.28	1,780
	July 2, 1947	4.37	1,070	1953	June 2, 1953 June 13, 1953	4.97 6.02	910 1,600
1948	May 21, 1948 June 2, 1948	4.71 4.49	1,310 1,150	1954	May 20, 1954	4.52	610
1949	June 11, 1949	4.40	1,100	1955	June 8, 1955	4.71	680
1950	June 16, 1949 June 6, 1950	4.41	1,120	1956	May 25, 1956 June 2, 1956	5.28 5.59	1,110 1,320

b About.

675. Eagle River at Eagle, Colo.

<u>Location</u>.--Lat 39°39', long 106°50', in sec.33, T.4 S., R.84 W., 500 ft downstream from highway bridge at Eagle and three-quarters of a mile upstream from Brush Creek.

Drainage area. -- 650 sq mi, approximately.

<u>Gage.</u>--Nonrecording at site 500 ft upstream prior to Apr. 5, 1919; recording thereafter. At datum 1.0 ft higher prior to Nov. 22, 1919. Datum of gage is 6,560 ft above mean sea level (estimated from nearby line of levels run by Geological Survey).

Stage-discharge relation. -- Defined by current-meter measurement; below 4,100 cfs.

Remarks.--Diversions for irrigation of about 6,000 acres. Diversion should not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 4,7,1911	3.7	2,790	1919	May 27, 1919	4.0	3,500
1912	June 6, 1912	5.3	5,260	1920	June 9, 1920	5.05	5,410
1913	May 30, 1913	4.1	3,550	1921	June 12, 1921	5.5	6,150
1914	June 3, 1914	6.3	6,760	1922	May 30, 1922 June 9, 1922	4.38 4.37	3,880 3,880
1915	June 22-23, _ 1915	4.2	3,760	1923	June 3, 1923 June 16, 1923	4.43 4.62	4,350 4,760
1916	June 20, 1916	4.21	3,770	1924	,	5.18	5,610
1917	June 18, 1917	6.05	6,370	1924	June 14, 1924	5.16	3,610
1918	June 12,14,1918	6.0	6,300				

680. Brush Creek near Eagle, Colo.

Location. --Lat 39°33'40", long 106°46'20", in $SE^1_{\overline{u}}$ sec.1, T.6 S., R.84 W., on left bank 150 ft downstream from Beecher Creek, $1^1_{\overline{u}}$ miles downstream from confluence of East and West Brush Creeks, and $7^1_{\overline{c}}$ miles southeast of Eagle.

Drainage area. -- 71 sq mi, approximately.

 $\underline{\texttt{Gage}}.\text{--Recording}.$ Altitude of gage is 7,450 ft (estimated from nearby level line).

Stage-discharge relation. -- Defined by current-meter measurements below 400 cfs.

Remarks.--Small diversions for irrigation of hay meadows above and below station. One small diversion to Gypsum Creek above station. Slight regulation by Zurcher's Lake (capacity, 450 acre-ft) on West Brush Creek for irrigation of hay meadows above station. Regulation and diversions do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 160 cfs.

Peak stages and discharges of Brush Creek near Eagle, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 29, 1951 June 21, 1951 July 17, 1951	3.31 3.70 3.69	171 294 291	1957	June 9, 1957 June 21, 1957 June 29, 1957 July 18, 1957	4.10 4.20 4.55 3.75	336 350 690 288
1952	June 7, 1952 Aug. 10, 1952	5.10 3.44	775 162	1958	May_ 30, 1958	3,80	295
1953	June 2, 1953 June 12, 1953 July 16, 1953	3.70 4.25 3.45	254 439 175	1959	June 5, 1958 June 8, 1959 June 20, 1959	4.09 3.85 4.37	445 277 566
1954	July 30, 1953 May 21, 1954	3.54 3.42	203	1960	June 8, 1960 June 21, 1960	3.79 3.74	297 306
1955	Dec. 30, 1954 June 8, 1955 June 22, 1955	a4.52 3.60 3.47	222 169	1961	May 30, 1961 June 12, 1961	3.49 3.54	173 176
1956	Feb. 4, 1956 May 24, 1956 June 1, 1956	a4.60 3.87 4.13	199 274	1962	May 13, 1962 June 7, 1962 June 13, 1962 June 30, 1962	3.50 3.62 3.68 3.71	180 214 238 253

a Ice jams.

690. Eagle River at Gypsum, Colo. (Published as "near Eagle" 1905-6)

Location.--Lat 39°39', long 106°57', in sec.5, T.5 S., R.85 W., at highway bridge 650 ft upstream from Gypsum Creek and a quarter of a mile north of railroad station at Gypsum.

Drainage area. -- 844 sq mi.

Gage. -- Nonrecording. At site 5 miles upstream at different datum Mar. 18, 1905, to Feb. 7, 1907. Datum of gage is 6,280 ft above mean sea level (estimated from known elevations along nearby railroad).

 $\frac{\text{Stage-discharge relation}}{\text{5,700 cfs.}}.\text{--Defined by current-meter measurements below}$

Remarks.--Diversions for irrigation of several thousand acres. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 4, 1905	6.0	6,600	1907 1908	June 16, 1907 June 12, 1908	6.6 5.9	3,960 3,000
1906	June 13, 1906	5.8	6,040	1909	June 20, 1909	7.75	5,720

695. Gypsum Creek near Gypsum, Colo.

Location.--Lat 39°33', long 106°56', in sec.9, T.6 S., R.85 W., on left bank 1 mile upstream from Sundell Creek and 7 miles south of Gypsum.

Drainage area. -- 63 sq mi, approximately.

Gage . -- Recording.

Stage-discharge relation. -- Defined by current-meter measurements below 320 cfs.

Remarks.--Diversion from tributary 1 mile upstream for municipal supply of Gypsum and small diversions for irrigation of hay meadows above station do not materially affect peak flows. Base for partial-duration series, 100 cfs.

Peak stages and discharges of Gypsum Creek near Gypsum, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	June 21, 1951	a4.08	256	1953	June 15, 1953	3.63	210
1952	June 11, 1952 July 3, 1952	4.65 3.51	395 162	1954	Dec. 27, 1953 May 23, 1954	b3.49 3.00	- 75
1953	June 4, 1953	3.17	114	1955	June 14, 1955	3.12	125

a Occurred on following day. b Backwater from ice.

700. Eagle River below Gypsum, Colo.

<u>Location</u>.--Lat 39°39', long 106°57', in NW $\frac{1}{4}$ sec.5, T.5 S., R.85 W., on right bank 30 ft downstream from bridge on U.S. Highways 6 and 24 st Gypsum and 150 ft downstream from Gypsum Creek.

Drainage area. -- 957 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 6,270 ft above mean sea level (estimated from known elevations along nearby railroad).

 $\underline{\text{Stage-discharge relation.--Defined}}$ by current-meter measurements below $\underline{6,000}$ cfs.

Remarks.--Transmountain and transbasin diversions, and many small diversions for irrigation of hay meadows. Diversions probably do not substantially affect flood peaks. Peak flows are principally from snowmelt. Base for partial-duration series, 3,500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage leight (feet)	Discharge (cfs)
1947	June 9, 1947 June 21, 1947 June 29, 1947	7.83 8.05 7.02	4,800 5,150 3,580	1956	May 23, 1956 June 3, 1956	7.33 7.58	3,910 4,260
1948	May 22, 1948 June 3, 1948	8.02 7.65	4,880 4,360	1957	June 8, 1957 June 21, 1957 June 29, 1957 July 18, 1957	8.16 7.65 9.17 7.25	5,120 4,360 6,460 3,800
1949	June 13, 1949 June 18, 1949	7.67 7.77	4,220 4,530	1958	May 29, 1958 June 6, 1958	7.98 8.19	4,820 5,140
1950	June 7, 1950 June 12, 1950	7.25 7.23	3,840 3,810	1959	June 8, 1959 June 20, 1959	7.33 7.33	3,980 3,950
1351	May 29, 1951 June 21, 1951 June 26, 1951	7.31 8.19 7.24	3,600 4,840 3,510	1960	June 8, 1960 June 18, 1960	7.42 7.13	4,040 3,640
1952	June 11, 1952 June 20, 1952	9.15 7.34	6,580 3,950	1961	May 30, 1961 May 13, 1962	6.36 7.29	2,640 3,860
1953	May 29, 1953 June 14, 1953	7.38 8.62	4,000 5,780	1302	June 15, 1962 June 22, 1962 July 1, 1962	7.42 7.20 7.04	4,040 3,730 3,520
1954	May 22, 1954	5.81	1,850		5 diy 1, 1362	1.04	3,020
1955	June 9, 1955	5.90	2,080				

705. Colorado River near Dotsero, Colo.

Location.--Lat 39°38'40", long 107°04'40", in sec.6, T.5 S., R.86 W., on left bank 500 ft south of U.S. Highways 6 and 24, $1\frac{1}{2}$ miles west of Dotsero, and $1\frac{1}{2}$ miles downstream from Eagle River.

Drainage area. -- 4,390 sq mi, approximately.

Gage.--Recording. Datum of gage is 6,130 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 17,900 cfs.

Remarks.--Flow affected by transmountain diversions, storage reservoirs, power development and diversions for irrigation of about 70,000 acres. Diversion and storage substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941 1942 1943 1944 1945	May 15, 1941 June 7, 1942 June 2, 1943 June 2, 1944 June 15, 1945	9.66 10.02 8.96 8.19 8.00	13,300 15,400 12,200 10,000 9,520	1952 1953 1954 1955	June 8, 1952 June 14, 1953 May 22, 1954 Aug. 5, 1955	11.56 9.18 4.54 5.58	19,100 12,800 3,530 5,380
1946 1947 1948 1949 1950	June 9, 1946 June 21, 1947 May 22, 1948 June 18, 1949 June 13, 1950	7.76 9.58 10.24 10.07 7.80	9,270 14,000 16,100 15,100 9,020	1956 1957 1958 1959 1960	May 24, 1956 June 8, 1957 May 30, 1958 June 10, 1959 June 5, 1960	8.75 11.16 10.04 7.04 7.36	11,500 17,700 14,400 7,630 8,270
1951	June 22, 1951	9.52	13,500	1961 1962	May 31, 1961 May 13, 1962	6.32 10.22	6,360 14,300

725. Colorado River at Glenwood Springs, Colo.

Location.--Lat 39°33'00", long 107°19'20", in sec.9, T.6 S., R.89 W., on right bank at powerplant at Glenwood Springs, 10 ft from U.S. Highways 6 and 24 and half a mile upstream from Roaring Fork.

Drainage area. -- 4.560 sq mi, approximately.

<u>Gage.</u>--Nonrecording prior to May 16, 1910; recording thereafter. Datum of gage is 5,720.71 ft above mean sea level, adjustment of 1912.

 $\underline{\underline{Stage-discharge\ relation}}$.--Defined by current-meter measurements below 28,000 cfs.

Remarks.--Flow affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas. Low flow regulated by Shoshone powerplant 6 miles above station. Diversions and regulation substantially affect peak flows. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	May 30, 1900	10.2	20,000	1913 1914	June 1, 1913 June 3, 1914	8.55 12.10	12,400 28,100
1301	May 22, 1901	10.2	20,000	1915	June 21, 1915	8.60	13,400
1902 1903	May 16, 1902 June 18, 1903	8.2 9.4	12,000 16,500	1916	June 14, 1916	8.95	14,800
1303	May 25, 1904	9.35	16,500	1917	June 19, 1917	12.4	29,400
1905	June 6, 1905	10.80	22,500	1918 1919	June 14, 1918 May 29, 1919	12.55 8.4	30,100 12,300
1906 1907	June 14, 1906 June 17, 1907	10.70 10.30	22,100 20,400	1920	June 1, 1920	11.2	24,300
1908	June 12, 1908 June 21, 1909	8.20 12.05	11,500 27,900	1921 1922	June 15, 1921 June 10, 1922	12.3 9.3	29,000 16,100
1910	June 1,4, 1910	8.90	14,600	1923 1924	June 17, 1923 June 15, 1924	10.3 11.25	20,400 24,500
1911 1912	June 9, 1911 June 9, 1912	9.10 12.00	15,200 27,700	1925	May 31, 1925	8.06	11,200

Peak stages and discharges of Colorado River at Glenwood Springs, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	June 7, 1926		23,000	1945	May 29, 1945	7.87	10,600
1927	May 22, 1927	9.83	18,400				
1928	May 31, 1928	11.88	27,400	1946	June 9, 1946	7.60	9,720
1929	June 10, 1929	10.54	21,400	1947	June 21, 1947	8.88	14,200
1930	June 1, 1930	9.17	15,500	1948	May 22, 1948	9.41	16,600
1330	Dune 1, 1000		10,000	1949	June 18, 1949	9.34	16,300
1931	June 8, 1931	7.72	9.710	1950	June 13, 1950	7,67	10,100
1932	May 24, 1932	9.64	17,300	1		1	}
1933	June 13, 1933	10.44	20,600	1951	June 21, 1951	8.87	14,400
1934	May 13, 1934	7.10	8,140	1952	June 8, 1952	10.44	20,800
1935	June 16, 1935	10.48	21,300	1953	June 14, 1953	8.64	14,000
			1	1954	May 22, 1954	5.64	4,060
1936	June 1, 1936	9.49	16,900	1955	May 24, 1955	6.08	5,400
1937	May 17, 1937	8.10	11,400			1	
1938	June 6, 1938	10.36	20,900	1956	May 24, 1956	8.72	12,600
1933	May 23, 1939	8.48	13,100	1957	June 8, 1957	10.26	18,900
1940	June 3, 1940	7.90	11,100	1958	May 29, 1958	9.51	16,000
				1959	June 10, 1959	7.15	8,480
1941	May 15, 1941	9.00	14,900	1960	June 4, 1960	7.70	9,730
1942	May 28, 1942	9,47	16,800	ll .	1		
1943	June 2, 1943	8.46	13,000	1961	May 31, 1961	6.97	7,680
1944	June 2, 1944	7.88	10,600	1962	May 13, 1962	9.83	14,600

ROARING FORK BASIN

735. Roaring Fork at Aspen, Colo.

Location.--39°11'20", long 106°48'55", in sec.7, T.10 S., R.84 W., at Aspen, three-quarters of a mile upstream from Hunter Creek.

Drainage area. -- 109 sq mi.

Gage.--Nonrecording prior to Apr. 24, 1932; recording thereafter. At site 1,800 ft upstream at different datum prior to Feb. 24, 1915. At site half a mile downstream at different datum Feb. 24, 1915, to Sept. 30, 1921, and Apr. 24, 1932, to Oct. 5, 1935. Datum of gage is 7,884.58 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurement3 below 1,200 cfs.}$

Remarks. -- Transmountain diversion at point 15 miles upstream through Twin Lakes tunnel to Arkansas River basin since May 24, 1935, substantially affects peak flows. Salvation ditch diverts water for irrigation of about 1,000 acres. Records for 1932-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911 1912	June 13, 1911 June 26, 1912	3.7 5.6	930 1,520	1937 1938 1939	May 18, 1937 June 22, 1938 May 20, 1939	3.49 4.85 3.53	586 1,130 567
1914 1915	June 1, 1914 June 24, 1915	6.0 5.6	1,900 2,180	1940	June 2, 1940	3.27	463
1916 1917 1918 1919 1920	June 13, 1916 June 18, 1917 June 13, 1918 May 28, 1919 June 9, 1920 June 14, 1921	4.9 7.2 5.8 4.3 4.8	1,560 3,170 2,380 1,120 1,510	1941 1942 1943 1944 1945 1946 1947	June 24, 1941 June 12, 1942 June 10, 1943 June 22, 1944 June 15, 1945 June 18, 1946 June 20, 1947	4.14 4.63 3.49 3.45 3.52 4.18 4.68	775 1,400 610 565 620 978 1,330
1932 1933 1934 1935	June 26, 1932 June 2, 1933 May 12, 1934 June 16, 1935	4.55 4.85 3.72 4.69	1,280 1,610 792 1,370	1948 1949 1950	June 4, 1948 June 18, 1949 June 7, 1950 June 20, 1951	4.88 4.37 3.57	1,440 1,090 625 780
1936	May 26, 1936	4.29	1,030	1952 1953	June 12, 1952 June 14, 1953	4.77 4.70	1,360 1,310

Peak stages and discharges of Roaring Fork at Aspen, Colo, -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954 1955	May 31, 1954 June 9, 1955	3.08 3.57	360 595	1959 1960	June 17, 1959 June 21, 1960	3.93 3.79	1,020 956
1956 1957 1958	June 3, 1956 June 29, 1957 June 8, 1958	4.18 5.40 4.97	921 1,910 1,560	1961 1962	June 10, 1961 June 14, 1962	3.23 3.83	705 1,060

740. Hunter Creek near Aspen, Colo.

<u>Location</u>.--Lat 39°12'20", long 106°48'00", in $SW_{\overline{u}}^1$ sec.5, T.10 S., R.84 W., on right bank 60 ft upstream from headgate of Red Mountain ditch, 100 ft upstream from bridge, $1\frac{1}{2}$ miles upstream from mouth, and $1\frac{1}{2}$ miles northeast of Aspen.

Drainage area. -- 40 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,600 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 580 cfs.

Remarks.--Several small diversions above station for irrigation of hay meadows above and below station do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 450 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 6, 1950 June 11, 1950	6.22 6.20	a592 585	1953	June 2, 1953 June 13, 1953	6.01 7.02	544 1,010
1951	May 30, 1951 June 21, 1951	5.89 6.17	477 574	1954	May 12, 1954	5.45	346
1952	June 10, 1952 June 19, 1952	6.99 6.03	995 552	1955 1956	June 8, 1955 May 22, 1956 June 2, 1956	6.01 5.88 6.14	520 520 600
1953	May 28, 1953	6.09	576		June 2, 1956	0.14	

a Maximum for period June to September.

750. Castle Creek near Aspen, Colo.

Location.--Lat 39°08'20", long 106°50'50", in sec.35, T.10 S., R.85 W., 75 ft downstream from highway bridge, 1 mile downstream from Conundrum Creek, and 4 miles south of Aspen.

Drainage area. -- 62 sq mi, approximately.

<u>Gage</u>.--Nonrecording prior to Apr. 11, 1915; recording thereafter. Datum of gage is 8,480 ft above mean sea level (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 650 cfs.

 $\underline{\text{Remarks.}}\text{--No}$ diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 330 cfs.

Total Dates and appearance										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1913	June 23, 1913	2.4	330	1917	June 27, 1917 July 23, 1917	3.85 3.42	8 9 0 558			
1914	June 18, 1914	3.4	580	1918	June 15, 1918	3.9	1,090			
1915 1916	June 25, 1915 June 17, 1916	2.7 3.22	442 577	1919	May 27, 1919 June 16, 1919	2.12 2.2	407 435			
1310	1 0 mic 11, 1310	J. LL] 5.,])	ounc 10, 1010					

780. Fryingpan River at Norrie, Colo.

Location. --Lat 39°19'50", long 106°39'30", in NE1 sec.28, T.8 S., R.83 W., on right bank 300 ft south of State Highway 104 at Norrie, 1 mile upstream from North Fork, and 2 miles downstream from Chapman Gulch.

Drainage area. -- 89.5 sq mi.

Gage. -- Nonrecording prior to October 1947 at site 200 ft upstream at different datum; recording thereafter. Altitude of gage is 8,410 ft (from riverprofile map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below }1,600 \text{ cfs}.$

Bankfull stage .-- 4 ft.

Remarks.--Transmountain diversion above station through Busk-Ivanhoe tunnel since 1925 does not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 760 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 15, 1911	6.30	1,360	1953	June 13, 1953	5.13	1,240
1912	June 25, 26, 1912	6.40	1,440	1954	May 21, 1954	3.91	636
1913	May 31, 1913	5.10	760	1955	June 8, 1955	4.10	762
1914	June 1, 1914	6.40	1,410	1956	May 22, 1956 June 2, 1956	4.50 4.70	935 1,070
1915	June 23, 1915	6.00	1,210				
1948	May 21, 1948 June 2, 1948	5.04 5.18	1,270 1,340	1957	June 8, 1957 June 30, 1957 July 18, 1957	5.00 a5.55 4.40	1,320 1,780 974
1949	May 28, 1949 June 16, 1949 July 1, 1949	4.22 4.68 4.12	830 1,060 780	1958	May 28, 1958 June 6, 1958	4.40 5.11	980 1,410
	0019 1, 1019	7,12	100	1959	June 16, 1959	4.28	938
1950	May 23, 1950 June 6, 1950 June 11, 1950	4.23 4.73 4.74	845 1,040 1,070	1960	June 4, 1960 June 17, 1960	4.18 4.23	820 848
1951	May 28, 1951	4.40	930	1961	May 29, 1961	4.06	760
	June 21, 1951	4.69	1,080	1962	June 13, 1962	4.23	896
1952	June 11, 1952	5.32	1,430	1	June 21, 1962	4.12	890
1953	May 28, 1953	4.50	960				

a Occurred June 28, 1957,

785. North Fork Fryingpan River near Norrie, Colo.

<u>Location</u>.-Lat 39°20'40", long 106°39'50", in N_2^1 sec.21, T.8 S., R.83 W., on left bank 1,000 ft upstream from bridge on State Highway 104, a quarter of a mile upstream from mouth, half a mile downstream from Last Chance Creek, and l mile northwest of Norrie.

Drainage area. -- 41.2 sq mi.

Gage.--Nonrecording Feb. 18, 1911, to Mar. 31, 1917, at differert datum; recording thereafter. At datum 2.00 ft higher Oct. 1, 1947, to Sept. 30, 1949. Altitude of gage is 8,400 ft (from topographic سه).

Stage-discharge relation. -- Defined by current-meter measurements below 700 cfs.

Remarks.--One small diversion above station which does not substantially affect flood peaks. Peak flows are principally from snowmelt. Base for partial-duration series, 420 cfs.

Peak stages and discharges of North Fork Fryingpan River near Norrie, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 15, 1911	3.60	765	1954	May 21, 1954	3.79	255
1912	June 5, 1912	2.70	480	1955	June 8, 1955	3.87	333
1914	June 1, 1914	3.05	630	1956	May 22, 1956 June 1, 1956	4.11 4.08	570 520
1915	June 23, 1915	2.90	525		1		
1916	June 14, 1916	2.40	418	1957	May 8, 1957 June 8, 1957 June 21, 1957	4.18 4.20 4.17	504 520 456
1948	May 21, 1948 June 3, 1948	3.80 3.67	490 586		June 30, 1957 July 18, 1957	4.82 4.35	1,140 650
1949	May 29, 1949 June 12, 1949 June 18, 1949	3.10 3.75 3.63	457 625 589	1958	May 28, 1958 June 6, 1958	4.31 4.98	610 1,320
	,		1	1959	June 7, 1959	4.16	530
1950	June 6, 1950 June 12, 1950	4.32 4.36	443 459	1960	June 5, 1960 June 8, 1960	4.26 4.24	710 646
1951	May 28, 1951 June 17, 1951	4.41 4.42	639 648		June 17, 1960	4.25	570
	June 25, 1961	4.18	466	1961	June 10, 1961	3.90	300
1952	June 10, 1952	4.40	927	1962	June 13, 1962 June 21, 1962	4.33 4.23	637 554
1953	May 28, 1953 June 13, 1953	4.23 4.29	500 720				

790. Lime Creek at Troutville, Colo.

<u>Location</u>.--Lat 39°25'10", long 106°38'30", in sec.22, T.7 S., R.83 W., on right bank a quarter of a mile downstream from Woods Lake and three-quarters of a mile west of Troutville.

Drainage area. -- 8.4 sq mi, approximately.

Gage.--Nonrecording prior to July 31, 1950; recording thereafter. Altitude of gage 1s 9,390 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 140 cfs.

Remarks. -- Flow regulated by several small lakes above gage. Regulation does not materially affect peak flow. Peaks are principally from snowmelt. Base for partial-duration series, 100 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 7, 1950 June 12, 1950	5.32 5.42	106 all4	1953	June 13, 1953	6.52	214
1951	May 29, 1951	5.47	114	1954	May 22, 1954	5.09	88
	June 22, 1951 June 26, 1951	5.79 5.45	147 117	1955	June 12, 1955 June 21, 1955	5.39 5.50	120 111
1952	June 11, 1952	6.19	170	1956	May 23, 1956 June 1, 1956	5.69 5.37	174 145
1953	May 29, 1953	5.64	134		June 1, 1956	3,31	145

a Maximum for period June to September.

795. Lime Creek at Thomasville, Colo.

Location. --Lat 39°21'20", long 106°41'30", in sec.18, T.8 S., R.83 W., on right bank 150 ft upstream from mouth, half a mile southeast of Thomasville, and lateral miles downstream from Spring Creek.

Drainage area. -- 32 sq mi, approximately.

Gage.--Recording. Altitude of gage is 8,050 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 210 cfs and by float measurement at gage height 5.68 ft.

Remarks .-- Small diversions for irrigation above station do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 170 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 3, 1950 June 7, 1950 June 12, 1950	4.98 5.10 5.00	182 202 185	1953	May 28, 1953 June 13, 1953	5.29 5.50	238 280
			256	1954	May 22, 1954	4.40	102
1951	May 29, 1951 June 22, 1951	5.25 5.15	239	1955	Dec. 28, 1954 June 12, 1955	c5.36 4.71	142
1952	May 6, 1952 June 8, 1952 June 11, 1952	b6.60 5.82	(a) 344	1956	May 23, 1956 June 1, 1956	5.47 5.39	27 4 258

a Unknown; probably exceeded base discharge. b Backwater from footbridge.

800. Fryingpan River at Thomasville, Colo.

Location. -- Lat 39°21'50", long 106°42'20", in sec.7, T.8 S., R.83 W., at private bridge 1,000 ft southwest of railroad station at Thomasville, a quarter of a mile upstream from Deadman Gulch, and 1 mile downstream from Lime Creek.

Drainage area. -- 175 sq mi; 190 sq mi at site used prior to Feb. 26, 1915.

<u>Gage</u>. --Nonrecording prior to May 11, 1918; recording thereafter. Jan. 2, 1911, to Feb. 25, 1915, at site 1 mile downstream at different datum. Datum of gage is 7,960 ft above mean sea level (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,900 cfs.

Remarks .-- No court decree for diversion of water above station during period of record. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911 1912	June 15, 1911 June 5, 6, 8, 1912	4.0 4.3	1,870 2,120	1916 1917 1919	June 20, 1916 June 18, 1917 May 28, 1919	4.9 7.0 4.75	1,580 2,780 1,680
1913	May 27, 1913	4.1	1,960	1920	June 8, 1920	5.45	2,180
1915	June 17, 20, 1915	4.7	1,460				

c Ice jam.

815. Crystal River at Marble, Colo.

Location. --Lat 39°04', long 107°11', in sec.26, T.11 S., R.88 W., at electric railway bridge at Marble, 0.2 mile downstream from Carbonate Creek, and three-quarters of a mile downstream from Yule Creek.

Drainage area. -- 77 sq mi, approximately.

 $\underline{\text{Gage.--Nonrecording.}}$ Datum of gage is 7,920 ft above mean sea level (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
	June 21, 1911	5.84	1,750	1915	June 23, 1915	5,37	1,450
	June 24, 1912	6.30	2,060		_		
	May 29, 1913	5.20	1,340	1917	June 25, 1917	7.48	2,980
1914	June 19, 1914	6.15	1,960	1			

816. Crystal River above Avalanche Creek, near Redstone, Colo.

<u>Location</u>.--Lat 39°14', long 107°14', in SW $\frac{1}{4}$ sec.33, T.9 S., R.88 W., on right bank $1\frac{1}{4}$ miles upstream from Avalanche Creek and $3\frac{1}{2}$ miles north of Redstone.

Drainage area. -- 167 sq mi.

Gage .-- Recording. Altitude of gage is 6,905 ft (from river-profile map).

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below 3,000~cfs .

Remarks.--A few small diversions for irrigation above station do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 2,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	June 2, 1956	4.52	2,400	1960	June 4, 1960	4.01	1,760
1957	June 8, 1957 July 1, 1957 July 19, 1957	4.71 5.65 4.34	2,700 3,980 2,160	1961	May 27, 1961 June 9, 1961	4.45 4.72	2,030 2,270
1958	May 29, 1958 June 6, 1958	4.41 4.90	2,250 2,890	1962	June 14, 1962 June 27, 1962	4.82 5.05	2,420 2,620
1959	June 14, 1959	4.28	2,100				

825. Crystal River near Redstone, Colo.

<u>Location</u>.--Lat 39°18', long 107°13', in $NE_{4}^{\frac{1}{4}}$ sec.9, T.9 S., R.88 W., on right bank 20 ft downstream from private bridge, 75 ft downstream from Nettle Creek, and 7 miles north of Redstone.

Drainage area. -- 220 sq mi.

<u>Gage</u>.--Recording. At site 1 mile downstream at different datum Oct. 21, 1946, to Aug. 28, 1957. Datum of gage is 6,483.77 ft above mean sea level, datum of 1929.

 $\underline{Stage\text{-}discharge\ relation}.\text{--} \\ \text{Defined\ by\ discharge\ measurements\ below\ 3,000\ cfs.}$

Bankfull stage .-- 10 ft.

Remarks.--Diversions for irrigation of 2,155 acres probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 2,000 cfs.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1935	June 15, 1935	4.80	2,980	1949	June 18, 1949 June 28, 1949	8.02 7.09	3,960 2,280			
1936	May 5, 1936 May 27, 1936 June 13, 1936	3.76 4.22 4.17	1,730 2,390 2,380	1950	June 6, 1950 June 17, 1950 June 24, 1950	7.33 7.55 7.16	2,690 3,090 2,380			
1937	May 13, 1937	4.14	2,090	1951	May 27, 1951	7.17	2,300			
1938	May 28, 1938 June 13, 1938	4.90 4.75	2,990 2,650		June 21, 1951	7,70	3,250			
	June 21, 1938	5.96	4,400	1952	June 15, 1952 June 19, 1952	8.58 8.14	3,960 3,080			
1939	June 5, 1939	4.00	1,960	1953	June 14, 1953	9.03	4,110			
1940 1941	June 1, 1940	4.14	2,090	1954	May 21, 1954	7.73	1,220			
1941	May 13, 1941 May 27, 1941 June 5, 1941 June 23, 1941	4.85 4.45 4.18 4.80	2,940 2,450 2,140 2,750	1955	June 13, 1955 June 23, 1955	8.57 8.65	2,340 2,480			
1942	June 12, 1942	4.70	2,680	1956	June 2, 1956	8.83	2,720			
1012	June 19, 1942	4.71	2,690	1957	June 8, 1957 July 1, 1957	9.20 9.24	3,030 4,390			
1943	June 2, 1943 June 9, 1943	4.96 4.31	3,110 2,310	1050	July 19, 1957	8.63	2,650			
1944	June 23, 1943	4.76 4.13	2,850	1958	May 29, 1958 June 6, 1958	4.93 5.47	2,300 2,800			
1944	May 30, 1944 June 25, 1944	4.13	2,870	1959	June 16, 1959	4.86	2,540			
1945	June 25, 1945	4.17	1,930	1960	June 4, 1960 June 17, 1960	4.73 4.65	2,120 2,040			
1946	June 18, 1946	6.02	2,910	1961	May 28, 1961	5.49	2,350			
1947	June 21, 1947 July 5, 1947	7.47 7.20	3,220 2,460		June 9, 1961	5.40	2,270			
1948	May 19, 1948 June 4, 1948	7.38 7.58	2,930 3,290	1962	June 14, 1962 June 28, 1962	5.83	2,600 2,710			

830. Thompson Creek near Carbondale, Colo.

Location. -- Lat 39°20', long 107°13', in sec.28, T.8 S., R.88 W., on right bank I mile upstream from mouth and 5 miles south of Carbondale.

Drainage area. -- 76 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,480 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements below 690 cfs.

Remarks.--Small diversions for irrigation of hay meadows above station. Translation diversion above station through Thompson Creek feeder ditch to West Divide Creek. Diversions do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 19, 1951 May 28, 1951	3.00 3.23	232 318	1956	June 5, 1956	3.28	263
	June 20, 1951	3.02	239	1957	June 8, 1957	4.13	800
	July 21, 1951	3.15	285	===.	June 21, 1957	3.61	750
				1	July 1, 1957	3.42	560
1952	May 5, 1952	3.78	594	i			
	May 15, 1952	3.91	666	1958	May 12, 1958	3.07	245
	June 4, 1952	3.90	720		May 28, 1958	3.40	422
	June 7, 1952	3.81	726				
		ļ	Į į	1959	May 14, 1959	3.14	341
1953	May 28, 1953	3.59	474		May 29, 1959	2.92	210
	June 19, 1953	3.36	320		June 8, 1959	2.96	225
			1	1	June 20, 1959	3.65	780
1954	May 9, 1954	2.91	163				
		ł		1960	May 13, 1960	2.90	270
1955	May 14, 1955	3.48	314		May 23, 1960	2.87	258
	Aug. 27, 1955	4.4	730		June 3, 1960	2.89	266
1956	May 7, 1956	3.36	298	L			

840. Cattle Creek near Carbondale, Colo.

Location. --Lat 39°28', long 107°03', in sec.12, T.7 S., R.87 W., on left tank just downstream from Taylor Creek, half a mile upstream from Missouri Feights Reservoir diversion and 10 miles northeast of Carbondale.

Drainage area. -- 31.1 sq mi.

Gage . -- Recording .

Stage-discharge relation .-- Defined by current-meter measurements below 180 cfs.

Remarks .-- Small diversions for irrigation of hay meadows above station do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 100 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 27, 1951	3.48	148	1953	May 28, 1953 June 13, 1953	4.67 3.64	270 153
1952	Apr. 20, 1952 Apr. 28, 1952 May 6, 1952 May 14, 1952	3.52 - 4.46 4.10	115 (a) 227 186	1954	Dec. 4, 1953 May 22, 1954	b2.99 2.67	- 37
	June 4, 1952	4.75	280	1955	May 14, 1955	3.12	100

a Unknown; probably exceeded base discharge. b Backwater from ice.

845. Fourmile Creek near Carbondale, Colo.

Location.--Lat 39°24', long 107°23', in SE $\frac{1}{4}$ sec.36, T.7 S., R.90 W., at boundary of Holy Cross National Forest, 9 miles west of Carbondale.

Drainage area, -- 8.0 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,830 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 75 cfs.

 $\frac{Remarks}{Base}$.-No diversion above station. Peak flows are principally from snowmelt.

			Peak stages a	and disch	narges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 9, 1942 May 21, 1942	2.48 2.56	94 102	1945	May 7, 1945	2.62	102
1943	May 4, 1943	2.17	60	1946	Apr. 17, 1946 Apr. 24, 1946	a3.57 2.25	- 74
1944	May 15, 1944 May 23, 1944	2.86 2.75	146 131	1947	Apr. 17, 1947 May 3, 1947 May 5, 1947	a3.87 2.72 2.52	- 120 96
1945	Apr. 24. 1945	a4.53	_		May 5, 1541	2.02	30

a Backwater from ice.

850. Roaring Fork at Glenwood Springs, Colo.

Location.--Lat 39°32'50", long 107°19'50", in sec.9, T.6 S., R.89 W., on left bank at Glenwood Springs, 1,500 ft upstream from mouth.

Drainage area. -- 1,460 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 27, 1917; recording thereafter. On highway bridge 800 ft downstream at different datum prior to Nov. 20, 1915. Datum of gage is 5,720.73 ft above mean sea level, adjustment of 1912.

Stage-discharge relation. -- Defined by current-meter measurements below 15,000 cfs.

Bankfull stage .-- 8 ft.

Remarks. --Diversions for irrigation of about 35,000 acres. Transmountain diversion through Twin Lakes and Busk-Ivanhoe tunnels to Arkansas River basin. Diversions do not substantially affect peak flows. Records for 1932-33 furnished by State engineer of Colorado. Peak flows are principally from snowmelt. Base for partial-duration series, 6,300 cfs.

Peak stages and discharges Gage Cage Water Discharge Water Discharge height Date Date height. (cfs) (cfs) vear year (feet) (feet) 1906 June 14, 1906 7.85 12,300 1917 June 17, 1917 6.45 11,600 8,960 1918 May 24, 1918 June 14, 1918 1907 July 1, 1907 6.70 4.82 6,690 8.45 17,600 1908 June 13, 1908 5.75 6,740 1919 May 29, 1919 5.15 7.590 1909 June 20, 1909 11,600 8.00 June 1, 1920 June 9, 1920 11,100 12,300 1920 6.41 1912 June 6, 8, 1912 7.55 12,800 6.78 1914 June 14, 1914 7.93 13,900 1921 June 14, 1921 8.7 17,600 1915 June 25, 1915 1922 May 28, 1922 June 9, 1922 9,000 5.40 6,530 9,000 1916 June 13, 19, 1916 5.60 8,520

Peak stages and discharges of Roaring Fork at Glenwood Springs, Colo, -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 27, 1923 June 17, 1923	5.26 5.85	8,040 9,580	1943	June 2, 1943 June 10, 1943 June 23, 1943	5.82 4.97 5.10	9,130 6,950 7,260
1924	June 7, 1924 June 14, 1924	5.70 6.85	9,160 12,500	1944	May 31, 1944 June 25, 1944	4.66 5.04	6,380 7,360
1925	May 31, 1925 June 22, 1925	5.00 5.60	7,200 8,880	1945	June 15, 1945 June 25, 1945	5.00 5.10	7,260 7,520
1926	May 26, 1926 June 7, 1926	6.36	6,000 9,640	1946	June 18, 1946	6.03	9,580
1927	May 19, 1927 June 10, 1927 June 28, 1927	5.50 6.05 6.07	7,410 8,340 8,890	1947	May 9, 1947 June 9, 1947 June 21, 1947 July 5, 1947	4.91 5.73 6.39 5.50	7,030 9,240 11,100 8,600
1928	May 31, 1928 June 9, 1928 June 27, 1928	6.57 5.20 5.56	11,000 6,540 7,590	1948	May 20, 1948 June 3, 1948 June 11, 1948	5.68 6.15 5.74	9,100 10, 4 00 8,770
1929	May 26, 1929 June 10, 1929 June 15, 1929	6.02 6.43 5.75	9,060 10,500 8,180	1949	June 18, 1949	6.72	10,400
1930	May 30, 1930 June 13, 1930	5.40 5.79	7,590 8,840	1950	June 7, 1950 June 12, 1950 June 17, 1950	5.26 5.34 5.39	6,760 6,960 7,090
1931	June 8, 1931	4.57	5,210	1951	June 22, 1951	6.08	8,290
1932	May 22, 1932 June 26, 1932	5.26 5.99	7,000 8,560	1952	June 11, 1952 June 20, 1952	7.74 6.23	13,000 9,120
1933	June 12, 1933	7.10	12,200	1953	May 29, 1953 June 14, 1953	5.36 7.23	6,820 11,500
1934	May 12, 1934	4.06	4,100	1954	May 22, 1954	3.80	3,480
1935	June 15, 1935 June 21, 1935	7.35 6.26	12,500 9,350	1955	June 14, 1955	4.57	5,480
1936	May 6, 1936 May 30, 1936	5.10 5.84	6,830 8,610	1956	June 3, 1956	6.10	8,920
1937	June 14, 1936 May 18, 1937	5.16 5.29	6,730 6,800	1957	June 9, 1957 July 1, 1957 July 18, 1957	6.48 8.64 5.59	11,000 19,000 8,430
1070	May 30, 1937	5.07	6,130	1958	May 30, 1958	5.85	9,360
1938	June 6, 1938 June 13, 1938 June 22, 1938	6.37 6.30 7.68	9,800 9,620 13,400	1959	June 6, 1958 June 15, 1959	7.25 4.95	13,900 7,880
1939	June 1, 1939	4.61	5,820	1960	June 5, 1960 June 18, 1960	5.25 5.21	6,820 6,720
1940	June 1, 1940	4.38	5,320	1961	June 10, 1961	4.78	5,660
1941	May 14, 1941 June 24, 1941	5.64 5.14	8,300 7,100	1962	May 13, 1962 June 14, 1962	5.25 5.66	6,700
1942	May 27, 1942 June 12, 1942 June 19, 1942	5.50 5.65 5.40	8,300 8,690 8,040		July 1, 1962	5.55	7,860 7,600

855. Canyon Creek near New Castle, Colo.

<u>Location</u>.--Lat 39°34'30", long 107°26'50", in NW_{1}^{1} sec.36, T.5 S., R.90 W., on left bank 20 ft upstream from Denver & Rio Grande Western Railroad Co. bridge, 250 ft upstream from mouth, and 5 miles east of New Castle.

Drainage area. -- 54.3 sq mi.

Gage. -- Recording. Altitude of gage is 5,620 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements below 620 cfs.

Remarks. -- Diversions above station for irrigation of about 1,100 acres, of which about 800 acres is along the Coloredo River. Diversions do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	June 8, 1955	5,68	630	1958	May 30, 1958 June 3, 1958	7.07	820
1956	June 2, 1956	5.62	710		June 7, 1958	-	770
1957	June 8, 1957 June 29, 1957	<u>-</u>	750 1,000	1959	June 8, 1959	5.58	798
	July 1, 1957	a9.60		1960	June 4, 1960	5.36	630
1958	May 28, 1958	-	900				

a Maximum gage height, backwater from Colorado River.

ELK CREEK BASIN

875. Elk Creek at New Castle, Colo.

Location. -- Lat 39°34'10", long 107°32'40", in SW_{μ}^{1} sec.31, T.5 S., R.90 W., on left bank at upstream side of Denver & Rio Grande Western Railroad Co. bridge in New Castle, 300 ft upstream from mouth.

Drainage area .-- 177 sq mi.

Gage. -- Nonrecording at site 300 ft upstream at different datum prior to 1955;
Altitude of gage is 5,550 ft (from river-profile map).

Stage-discharge relation. --Defined by current-meter measurements below 1,600 cfs.

Remarks. -- Diversions above station for irrigation of about 3,500 acres do not materially affect peak flows. Peaks are principally from snowmelt. Records prior to 1955 furnished by State engineer of Colorado. Base for partial-duration series, 800 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922 1923	May 27, 1922 May 28, 1923	-	al,400 a881	1957	June 30, 1957	6.17	1,500
1955	May 16, 1955	5.38	836	1958	May 28, 1958 June 3, 1958 June 7, 1958	6.06 5.99 5.75	1,560 1,480 1,180
1956	May 21, 1956	-	950	1959	June 8, 1959	5.42	980
1957	June 10, 1957 June 21, 1957	6.23 5.76	1,770 1,230	1960	May 14, 1960	5.30	795

a Annual peak only.

880. Baldy Creek near New Castle, Colo.

Location.--Lat 39°29', long 107°30', in NE_{π}^{1} sec.36, T.6 S., R.91 W., on left bank 100 ft upstream from diversion headgate, 2.3 miles above mouth, and 6 miles southeast of New Castle.

Drainage area. -- 16.1 sq mi.

Gage . -- Recording .

Stage-discharge relation. -- Defined by current-meter measurements below 190 cfs.

Remarks.--One small diversion above station does not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 40 cfs.

Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 8, 1956	4.10	54	1958	May 21, 1958	4.60	104
1957	May 9, 1957 June 2, 1957	4.39 5.80	93 242	1959	May 14, 1959	4.39	56
	June 2, 1957 June 15, 1957	4.63	100	1960	May 12, 1960	4.35	67
1958	May 7, 1958	4.41	74	1961	May 23, 1961	4.10	52

DIVIDE CREEK BASIN

890. West Divide Creek below Willow Creek, near Raven, Colo.

 $\frac{\text{Location.--Lat } 39°17', \text{ long } 107°31', \text{ in NE}_{4}^{1} \text{ sec.14, T.9 S., R.91 W., a quarter of a mile downstream from Willow Creek and 15 miles south of Raven.}$

Drainage area. -- 32.7 sq mi.

Gage .-- Recording. Altitude of gage is 7,800 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 350 cfs.

Remarks.--No diversion for irrigation above station. Flow increased above station by importation of water by Clear Fork ditch from Clear Fork East Muddy Creek in Gunnison River basin and by Thompson Creek feeder ditch from Thompson Creek in Roaring Fork basin. Importation probably does not substantially affect floodflows. Peak flows are principally from snowmelt. Base for partial-duration series, 170 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 5, 1939	1.80	225	1944	May 15, 1944 May 23, 1944	3.33 3.17	698 615
1940	May 9, 1940	1.91	271	1945	May 13, 1945	2.55	338
1941	May 13, 1941	3,27	876	1343	May 17, 1945 May 26, 1945	2.56	341 287
1942	Apr. 22, 1942 May 10, 1942	2.26 2.62	285 439		June 5, 1945	2.03	175
	May 26, 1942	3,00	580	1946	Apr. 28, 1946	2.16	228
1943	Apr. 30, 1943	2.07	169	1947	May 8, 1947	3.00	415

915. East Rifle Creek near Rifle, Colo. (Published as East Fork Rifle Creek 1936-43)

<u>Location.</u>--Lat 39°41', long 107°41', in sec.22, T.4 S., R.92 V., just downstream from Rifle Falls, 7.2 miles upstream from mouth and 12 miles northeast of Rifle.

Drainage area. -- 32 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 4, 1938; recording thereafter. At different datum prior to Apr. 20, 1938. Altitude of gage is 6,550 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 50 cfs.

Bankfull stage .-- 3 ft.

Remarks.--Flow somewhat regulated by Rifle powerplant just above station. Several small diversions for irrigation above station. High flows can bypass the station and substantially affect flood peaks. Records for 1937-40 furnished by Bureau of Reclamation.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1937 1938 1939 1940	Aug. 5, 1937 Aug. 31, 1938 May 5, 1939 May 9, 1940	4.00 3.40 1.48 1.80	409 346 68 96	1957 1958 1959 1960	June 5, 1957 May 23-25,1958 May 17-19, 1959 May 12, 1960	3.35 - 2.45	138 all5 a57 80			
1941 1942 1943	May 13, 1941 May 27, 1942 Aug. 18, 1943	2.12 2.32 1.58	131 168 52	1961 1962	Feb. 17, 1961 May 12, 1962	2.25 3.17	63 160			

a Maximum daily.

920. Rifle Creek near Rifle, Colo.

Location. --Lat 39°37'10", long 107°45'45", in $NE_{u}^{1}NW_{u}^{1}$ sec.18, T.5 S., R.92 W., 0.5 mile downstream from confluence of East and West Rifle Creeks and 6.2 miles northeast of Rifle.

Drainage area. -- 140 sq mi.

Gage. -- Nonrecording prior to July 21, 1942, at site 100 ft downstream at datum 1.31 ft higher; recording thereafter. Altitude of gage is 5,780 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 110 cfs and extended above on basis of slope-area measurement at 759 cfs.

Remarks.--Diversion to Grass Valley Reservoir (capacity, 5,000 acre-ft) from East Fork Rifle Creek for use outside Rifle Creek basin. Also diversions above station for irrigation in Rifle Creek basin of about 1,500 acres. Diversions probably affect peak flows substantially. Records for 1940 furnished by Bureau of Reclamation. Base for partial-duration series, 140 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept.30, 1940	1.86	134	1951	July 27, 1951	a7.7	1,500
1941	May 15, 1941	2.10	180	1953	July 18, 1953	6.14	758
1942	May 27, 1942	2.98	348	1954	July 13, 1954	2.95	152
1943	Mar. 10, 1943	2.70	126	ĺ	July 14, 1954 July 16, 1954 July 19, 1954	3.2 3.4 3.7	191 224 277
1944	May 24, 1944	1.30	110		July 25, 1954	2.9	146
1945	Aug. 5, 1945	3.91	343	1955	Sept. 8, 1954 Oct. 9, 1954	3.2 3.72	196 295
1946	Aug. 23, 1946	2.85	215	1333	, 000. 3, 1334	3.72	233
2 Pm	om floodmanka. s		A	<u>'</u>	'		1

a From floodmarks; at site 100 ft downstream.

Peak stages and discharges of Rifle Creek near Rifle, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Aug. 16, 1956	2.83	162	1960	Sept.15, 1960	2.73	150
1957	June 6, 1957	2.82	183	1961	Sept.22, 1961	2.91	176
1958	May 20, 1958	2.54	139	1962	Feb. 12, 1962 May 11, 1962	3.43 3.22	292 260
1959	Feb. 17, 1959 May 16, 1959	b2.90 1.95	- 68		May 11, 1902	3,22	200

b Backwater from ice.

BEAVER CREEK BASIN

925. Beaver Creek near Rifle, Colo.

Location. --Lat 39°28'20", long 107°49'55", in NEL sec.1, T.7 S., R.94 W., on left bank 150 ft upstream from unnamed tributary, 200 ft upstream from road bridge, 4 miles upstream from mouth, and 4.8 miles southwest of Rifle.

Drainage area. -- 7.90 sq mi.

Gage.--Recording gage and plank control. Altitude of gage is 6,685 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 40 cfs.

Remarks.--Diversions above station for irrigation of 170 acres below station and 380 acres in Mamma Creek basin. Diversions do not materially affect peak flows. Base for partial-duration series, 25 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 29, 1953 June 3, 1953	3.46 3.36	32 27 27	1958	May 12, 1958 May 29, 1958	3.47 3.70	33 57
	June 19, 1953	3.37	41	1959	May 15, 1959	3.42	31
1954	May 21, 1954	3.33	27	1960	May 13, 1960 June 1, 1960	3.41 3.40	28 29
1955	May 14, 1955	3.63	43	1961	May 22, 1961	3.45	32
1956	May 7, 1956	3.38	22	1962	May 12, 1962	3.71	65
1957	June 5, 1957 June 28, 1957	3.60 3.10	72 57		June 14, 1962 June 30, 1962	3.44 3.39	35 29

BATTLEMENT CREEK BASIN

926. Battlement Creek near Grand Valley, Colo.

<u>Location</u>.--Lat 39°26'10", long 107°58'40", in $NE_{\overline{4}}^{\frac{1}{2}}SE_{\overline{4}}^{\frac{1}{2}}$ sec.15, T.7 S., R.9E W., on left bank 300 ft downstream from ford, $4\frac{1}{2}$ miles upstream from mouth, and 5 miles southeast of Grand Valley.

Drainage area .-- 8.31 sq mi.

Gage .-- Recording. Altitude of gage is 6,630 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 72 cfs.

Remarks.--No diversions above station. Slight regulation from Battlement Reservoir does not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 40 cfs.

Peak stages and discharges of Battlement Creek near Grand Valley, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	May 6, 1957 June 7, 1957	2.29	41 102	1960	June 4, 1960	2.26	41
	July 1, 1957	2.71	91	1961	May 25, 1961	2.27	46
1958	May 12, 1958 May 28, 1958	2.25 2.71	46 91	1962	May 12, 1962 June 14, 1962	2.54 2.52	58 54
1959	May 16, 1959	2.13	26				

PARACHUTE CREEK BASIN

930. Parachute Creek near Grand Valley, Colo.

<u>Location</u>.--Lat 39°34'30", long 108°06'35", in NE_{u}^{1} sec.36, T.5 S., R.96 W., on right bank 100 ft downstream from bridge, 0.1 mile downstream from confluence of West and East Forks, and 9 miles north of Grand Valley.

Drainage area. -- 144 sq mi.

Gage .-- Recording. Altitude of gage is 5,780 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 710 cfs.

Remarks. -- Diversions for irrigation of 75 acres above station. One diversion from East Fork bypasses station for irrigation of 100 acres below station. Diversions do not materially affect peak flows. Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Apr. 29, 1949 May 4, 1949 May 15, 1949	3.35 3.62 3.48	222 318 269	1952 1953	May 5, 1952 Aug. 10, 1953	a5.20 4.90	738 320
1950	May 14, 1950	3.27	148	1954	Apr. 18, 1954	4.44	100
1951	July 21, 1951	3.24	147				

a Occurred on following day.

935. Parachute Creek at Grand Valley, Colo.

<u>Location</u>.--Lat 39°27'10", long 108°03'30", in NW $\frac{1}{4}$ sec.12, T.7 S., R.96 W., on right bank at west edge of Grand Valley, half a mile upstream from bridge on U.S. Highways 6 and 24 and $1\frac{1}{4}$ miles upstream from mouth.

Drainage area .-- 200 sq mi.

Gage. --Nonrecording prior to Oct. 1, 1927; recording thereafter. At different datum prior to Oct. 1, 1923. At datum 10 ft lower than original datum Oct. 1, 1923, to Sept. 30, 1927. Altitude of gage is 5,100 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 870 cfs.

Remarks.--Diversions for irrigation of about 1,800 acres. Diversions probably do not substantially affect flood peaks. Records for 1923-27 furnished by State engineer of Colorado. Base for partial-duration series, 200 cfs.

Peak stages and discharges of Parachute Creek at Grand Valley, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	May 17, 1921	2.45	556	1949	May 3, 1949 July 24, 1949	3.03 3.66	300 422
1922	May 20, 1922	2.9	795		July 24, 1343	3,00	#22
1007	W- 10 00 1007			1950	May 19, 1950	2.66	139
1923	May 10, 20, 1923	1.95	425	1951	Aug. 3, 1951	4.32	600
1924	Apr. 23, 1924	-	350		,		
1925	Apr. 5, 17, 1925	1.7	92	1952	May 5, 1952 July 28, 1952	4.99 4.25	912 355
1926	Apr. 27, 1926	2.2	226	1953	Aug. 10, 1953	3.92	284
1927	May 2, 1927	2.6	360	1954	Sept. 8, 1954	3,62	194
1949	Apr. 26, 1949	3.22	291				

ROAN CREEK BASIN

950. Roan Creek near De Beque, Colo.

Location.--Lat 39°27'15", long 108°19'00", on line between secs. 10 and 15, T.7 S., R.98 W., at highway bridge half a mile downstream from Kimball Creek and 11 miles north of De Beque.

Drainage area. -- 210 sq mi.

Gage. -- Nonrecording. Altitude of gage is 5,380 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 700 cfs.

Remarks.--Diversions for irrigation of about 3,000 acres substantially affect peak flows. Records for 1924-26 furnished by State engineer of Colorato. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	May 18, 1921	2,30	632	1925	July 2, 1925	1.95	96
1922 1923 1924	May 21, 1922 May 12, 1923 Apr. 8, 1924	4.45 3.77 2,68	1,110 980 214	1926	May 1, 1926	2.40	193

COLORADO RIVER MAIN STEM

955. Colorado River near Cameo, Colo.

Location. --Lat 39°14'20", long 108°16'00", in $SW_{\pm}^{1}SW_{\pm}^{1}$ sec.30, T.9 S., R.97 W., on left bank 100 ft north of U.S. Highways 6 and 24, 5.9 miles upstream from Grand Valley Project diversion dam, and 7 miles northeast of Cameo.

Drainage area. -- 8,050 sq mi, approximately.

Gage.--Recording since Oct. 9, 1934. At site 3 miles downstream at datum 22.55 ft lower prior to Feb. 28, 1958. Datum of gage is 4,813.73 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 31,000 cfs.

Bankfull stage .-- 18 ft.

Remarks.--Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, and diversions for irrigation. Diversions and regulation substantially affect flood peaks. Peak flows are principally from snowmelt. Records for water year 1934 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges of Colorado River near Cameo, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934 1935	June 16, 1935	10.91	15,000 36,000	1949 1950	June 18, 1949 June 13, 1950	10.22 8.10	27,700 17,600
1936 1937 1938 1939 1940	June 1, 1936 May 18, 1937 June 6, 1938 May 23, 1939 June 3, 1940	9.72 8.49 10.73 8.44 7.82	26,500 20,200 31,200 19,900 16,600	1951 1952 1953 1954 1955	June 22, 1951 June 8, 1952 June 14, 1953 May 22, 1954 June 9, 1955	9.35 11.60 9.84 5.40 5.89	22,800 32,500 24,700 8,490 10,400
1941 1942 1943 1944 1945	May 14, 1941 May 28, 1942 June 3, 1943 May 31, 1944 June 25, 1945	9.96 9.70 8.97 8.23 8.19	27,500 26,900 22,600 19,000 18,800	1956 1957 1958 1959 1960	June 3, 1956 July 1, 1957 May 30, 1958 June 10, 1959 June 5, 1960	8.95 11.44 10.85 8.60 8.76	20,600 31,400 25,900 16,400 16,700
1946 1947 1948	June 18, 1946 June 22, 1947 May 22, 1948	8.32 9.75 10.10	19,400 26,400 27,600	1961 1962	Jan. 7, 1961 June 1, 1961 May 13, 1962	a8.35 - 10.77	13,100 25,500

a Backwater from ice.

PLATEAU CREEK BASIN

960. Plateau Creek at upper station, near Collbran, Colo.

Location. --Lat 39°13'20", long 107°48'00", in $NW_{\overline{u}}^{1}NW_{\overline{u}}^{1}$ sec. 5, T.10 S., R.93 W., on left bank $1_{\overline{u}}^{1}$ miles upstream from Park Creek and $8_{\overline{2}}^{1}$ miles southeast of Collbran.

Drainage area. -- 24 sq mi, approximately.

<u>Gage.</u>--Nonrecording prior to Nov. 26, 1939, at several sites within $1\frac{1}{2}$ miles of present site at various datums; recording thereafter. At site half a mile downstream at different datum Mar. 18, 1940, to Sept. 20, 1943, and May 1 to Oct. 5, 1951. Altitude of gage is 7,885 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 180 cfs.

Bankfull stage. -- 6 ft at site half a mile downstream.

Remarks.--One small reservoir (capacity, 200 acre-ft) and diversions for irrigation of about 730 acres. Erie Canal diverts water to Buzzard Creek drainage for irrigation of about 140 acres. Diversions probably do not substantially affect floodflows. Peak flows are principally from snowmelt. Records for May 1937 to June 1941 furnished by Bureau of Reclamation. Base for partial-duration series, 150 cfs.

Water year	D	ate	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 1	7, 1937	4.56	226	1952	May 15, 1952 June 7, 1952	5.11 5.54	161 213
1938	May 2	8, 1938	4.90	334	1953	May 28, 1953	5.08	159
1939	May 1	0, 1939	2.48	165			,	
1941		4, 1941	3.87	441	1954	May 19, 1954	4.50	94
	May 2	4, 1941	3.04	292	1955	May 14, 1955	4.90	140
1942		8, 1942 7, 1942	3.18 3.90	245 450	1956	May 20, 1956	4.63	120
1943	ĺ	2, 1943	3.14	240	1957	June 9, 1957 June 15, 1957	5.42 5.66	227 255
1952	May	5, 1952	5.05	154	1958	Apr. 22, 1958	4.50	93

965. Plateau Creek near Collbran, Colo.

<u>Location</u>.--Lat 39°15'00", long 107°50'25", in $NE_{\mu}^{\frac{1}{2}}$ sec.26, T.9 S., R.94 W., 10 ft downstream from private bridge, $l_{\frac{1}{2}}^{\frac{1}{2}}$ miles downstream from Leon Creek, and 6 miles east of Collbran.

Drainage area. -- 88 sq mi, approximately.

<u>Gage.</u>--Recording. At site half a mile downstream at different datum prior to May 1, 1928. Altitude of gage is 7,130 ft (from topographic map).

 $\underline{\mathtt{Stage-discharge\ relation}}.\text{--Defined\ by\ current-meter\ measurements\ below}$ 1,300 cfs.

Remarks.--Diversions for irrigation of about 1,300 acres. Diversions above station to Surface Creek in Gunnison River basin. Diversions probably do not substantially affect floodflows. Peak flows are principally from snowmelt. Records for 1921-33 furnished by State engineer of Colorado. Base for partial-duration series, 830 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 27, 1922	6.90	3,080	1943	June 2, 1943	5.08	1,390
1923	June 3, 1923 June 12, 1923	5.90 5.68	1,230 1,090	1944	Aug. 11, 1943 May 16, 1944	5.16 4.74	1,540 1,130
1924	May 17, 1924 June 4, 1924	5.75 5.30	1,220 890		June 1, 1944 June 9, 1944	4.83 4.89	1,250 1,330
1925	Sept.19, 1925	5.28	879	1945	May 26, 1945 June 5, 1945 June 13, 1945	4.89 4.79 5.09	1,330 1,200 1,610
1926	May 24, 1926 June 2, 1926	5.52 5.70	1,240 1,430	1946	June 6, 1946	4.78	1,200
1927	May 21, 1927 June 15, 1927	5.85 5.14	1,600 865	1947	May 10, 1947 May 22, 1947 June 21, 1947	4.91 4.90 4.85	1,290 1,180 1,080
1929	May 25, 1929 June 16, 1929	3.80 3.05	1,080 1,060	1948	May 19, 1948 May 28, 1948	5.05 4.68	1,430 958
1930	May 29, 1930 June 7, 1930	3.35 3.18	1,060 941	1949	June 2, 1948	4.58 4.61	848 911
1931	May 17, 1931	3.28	908		1)	
1932	May 21, 1932 June 13, 1932	3.98 3.40	1,990 1,000	1950	May 31, 1950 June 5, 1950	4.84 4.63	1,270 1,010
1933	May 30, 1933	3.85	1,350	1951	May 27, 1951	4.76	1,170
	June 6, 1933	-	1,300	1952	May 15, 1952 June 10, 1952	4.53 4.99	886 1,480
1934	May 9, 1934	3.35	373	1953	June 2, 1953	4.95	1,360
1935	June 6, 1935	3.86	1,140	1954	May 17, 1954	4.42	818
1936	May 5, 1936 May 17, 1936	3.89 3.96	1,060 1,150	1955	May 14, 1955 May 24, 1955	4.63 4.56	1,020 950
1937	May 17, 1937 May 27, 1937	4.01 3.88	1,370 1,130	1956	May 20, 1956	4.49	942
1938	Apr. 30, 1938 May 16, 1938 June 2, 1938	3.75 3.97 4.50	930 1,290 1,690	1957	June 9, 1957 June 24, 1957	4.85 5.08	1,300 1,590
1939	June 21, 1938 May 19, 1939	4.44	1,100	1958	May 23, 1958 May 28, 1958 June 5, 1958	4.90 4.94 4.85	1,220 1,270 1,160
1940				3.050			680
	May 9, 1940	4.56	1,310	1959	May 15, 1959	4.00	
1941	May 18, 1941 May 26, 1941	4.58 4.67	1,360 1,520	1960	May 14, 1960	a4.34	815
1942	June 7, 1941 Oct. 13, 1941 May 27, 1942	4.46 4.27 4.72	1,140 860 1,380	1961	May 27, 1961 June 12, 1962	4.15 4.20	740 758

a Occurred on preceding day.

968. Buzzard Creek below Owens Creek, near Heiberger, Colo.

<u>Location</u>.--Lat 39°14', long 107°38', in $N\frac{1}{2}$ sec.35, T.9 S., R.92 W., on left bank 500 ft downstream from Owens Creek, $2\frac{1}{2}$ miles upstream from Porter Creek, $4\frac{1}{2}$ miles southeast of Hightower ranger station, and $8\frac{1}{2}$ miles southeast of Helberger.

Drainage area. -- 52.2 sq mi.

Gage. -- Recording. Altitude of gage is 8,215 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 430 cfs.

 $\frac{\text{Remarks.--Diversions above station from Owens Creek to West Divide Creek basin}{\text{do not materially affect peak flows.}} \quad \text{Peaks are principally from snowmelt.} \\ \text{Base for partial-duration series, 300 cfs.}$

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 7, 1956	4.58	256	1959	May 15, 1959	4.24	260
1957	May 9, 1957 June 4, 1957 June 15, 1957	5.41 5.82 4.82	402 636 420	1960	Apr. 21, 1960 May 12, 1960	4.00 4.74	220 385
1958	Apr. 22, 1958	4.02	224	1961	May 22, 1961	4.14	218
	May 7, 1958 May 12, 1958 May 23, 1958 June 6, 1938	5.19 5.17 4.94 4.42	512 508 435 330	1962	Apr. 28, 1962 May 11, 1962 June 4, 1962	4.55 5.43 4.03	360 572 258

970. Buzzard Creek near Heiberger, Colo.

<u>Location</u>.--Lat 39°17', long 107°43', in NE $\frac{1}{4}$ sec.13, T.9 S., R.93 W., 1.1 miles downstream from Hightower ranger station, 3 miles east of Heiberger, and 8 miles upstream from Brush Creek.

Drainage area .-- 76.5 sq mi.

<u>Gage.</u>--Recording. At datum 1.00 ft higher prior to July 22, 1937. Altitude of gage is 7,270 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 700 cfs.

Remarks.--Diversions for irrigation of a few acres do not substantially affect floodflows. Peak flows are principally from snowmelt. Base for partial-duration series, 320 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 9, 1937	4.20	588	1940	May 4, 1940	3.40	320
1938	Apr. 30, 1938 May 14, 1938	4.45 4.43	720 712	1941	May 13, 1941	5.05	968
	May 29, 1938	4.03	566	1942	Apr. 23, 1942		400
1939	May 5, 1939	3.44	359		May 10, 1942 May 26, 1942	4.61 4.76	870 932

975. Buzzard Creek near Collbran, Colo.

Location. -- Lat 39°16'20", long 107°51'00", in sec.14, T.9 S., R.94 W., on right bank 150 ft upstream from county bridge, half a mile upstream from Brush Creek, and 7 miles east of Collbran.

Drainage area. -- 139 sq mi.

Gage .-- Recording. Altitude of gage is 6,955 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 900 cfs.

Remarks.--Diversions for irrigation of about 1,300 acres. Erie Canal diverts water from Plateau Creek for irrigation of about 140 acres. Diversions do not substantially affect floodflows. Peak flows are principally from snowmelt. Records for 1921-33 furnished by State engineer of Colorado. Base for partial-duration series, 350 cfs.

Peak stages and discharges Gage Gage Discharge Water Discharge Water Date Date height height (cfs) (cfs) vear vear (feet) (feet) 1922 8, 1922 7.75 1942 14, 1942 5.98 1,020 May 960 Apr. May 29, 1922 6.90 795 Apr. May 23, 1942 5.50 882 6.85 12, 1942 1,370 1923 11, 1923 6.10 601 7.07 1,400 May May 24, 1942 May 22, 1923 26, 1923 6.35 644 May 6.90 742 1943 June 2, 1943 3.73 342 1924 24, 1924 12, 1924 4.58 6.25 360 1944 7.40 1,530 Apr. May 17, 1944 May 24, 1944 5.87 628 May 981 1925 Apr. 18, 1925 4.55 345 1945 4.91 678 May May 27, 1945 4.12 455 1926 25, 1926 5.85 Apr. 535 1946 21, 4.07 450 Apr. 29, 1946 May 1926 5.00 421 1927 May 7, 1927 5.68 517 1947 May 5, 1947 5.65 898 18, 1927 May 6.55 648 May 22, 1927 5.28 459 1948 Apr. 18, 1948 4.87 666 Apr. 29, 1948 May 8, 1948 June 15, 1927 4.55 357 5.75 930 5.66 903 7.10 1928 1928 772 15, 5.42 May Mav 1948 831 May 7, 1928 27, 1928 6.40 5.20 662 4, 1949 16, 1949 487 May 474 1949 May 4.40 May 4.39 484 1929 18, 1929 6.3 726 Apr. 5.56 7.30 7.18 1950 24, 1929 10, 1929 581 Мау 23, 1950 3.81 346 Apr. May 940 īε, May 1929 911 1951 28, 1951 3.32 244 Mav 1930 Apr. 9, 1930 4.66 370 1952 Apr. 18, 1952 4.90 650 24, 1930 28, 1930 27, 1952 5, 1952 4.64 4.87 641 Apr. 349 Apr. May 4.60 385 May 5.78 914 14, May 1952 4.95 665 1931 May 18, 1931 4.18 477 1953 Mav 29. 1953 4.40 500 1932 17, 1932 4.66 462 Apr. 21, 1932 15, 1932 1954 2.95 184 Apr. 4.62 454 May 10, 1954 6.30 790 1955 May 8, 1955 3.82 355 1933 May 28, 1933 6.25 766 1956 266 May 8, 1956 3.43 1934 Apr. 26, 1934 2.91 137 1957 Apr. 17, 1957 3.85 367 1935 May 26, 1935 5.07 489 9, 1957 5.63 893 May June 5, 1957 5.86 968 Apr. 1936 23, 1936 4.42 370 June 16, 1957 5.00 710 5.00 May 5, 1936 476 1958 Apr. 22, 1958 4.12 430 8, 1958 12, 1958 6, 1958 1,040 1937 Мау 9, 1937 631 May 6.16 6.00 987 May 1938 Apr. 25, 1938 6.52 852 June 3.74 355 May 1, 1938 16, 1938 6.62 874 877 1959 15, 1959 268 May 6.63 May 3.44 29, 1938 13, 1938 May 5.27 596 374 1960 Apr. 10, 1960 May 13, 1960 4.61 563 June 4.12 May 4.58 554 1939 May 6, 1939 3.88 318 1961 Мау 12, 1961 3.67 318 1940 7, 1940 3.96 May 345 1962 20, 1962 5.18 731 Apr. 1941 May 4, 1941 6.29 1,050 Apr. 29, 1962 May 12, 1962 4.99 647 14, 1941 7.80 902 May 1,630 5.79

976. Brush Creek near Collbran, Colo.

Location. --Lat 39°19'30", long 107°50'30", in $W_{\frac{1}{2}}$ sec.36, T.8 S., R.94 W., on right bank at site of former highway bridge, 1 mile downstream from West Brush Creek, 4 miles upstream from mouth, and $8\frac{1}{2}$ miles northeast of Collbran.

Drainage area. -- 10.6 sq mi.

Gage. -- Recording. Altitude of gage is 8,183 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 270 cfs.

Remarks.--Small diversion above station does not materially affect peak flows.

Peaks are principally from snowmelt. Base for partial-duration series,
50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	March or April	a4.38		1959	May 15, 1959	2.65	51
1500	May 7, 1956	3.13	69	1960	May 12, 1960	3.29	81
1957	May 5, 1957	3.14	75 317	1961	May 19, 1961	3.05	55
	June 7, 1957	4.35	317	1962	Apr. 19, 1962	3.35	78
1958	May 7, 1958	3.00	88	}	Apr. 25, 1962	3.38	84 117
	May 20, 1958	3.19	133	Ш	May 6, 1962	3.58	111

a Ice jam.

995. Big Creek at upper station, near Collbran, Colo.

<u>Location</u>.--Lat 39°08', long 107°55', in NE_{4}^{1} sec.5, T.11 S., R.94 W., on right bank at downstream side of bridge, half a mile downstream from Barter Creek, 8 miles south of Collbran, and 9 miles upstream from mouth.

Drainage area. -- 17 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 8,590 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 250 cfs.

Bankfull stage .-- 9 ft.

Remarks.--Flow regulated by several small storage reservoirs above station. No irrigation in Big Creek basin above station. Regulation probably affects floodflows substantially. Peak flows are principally from snowmelt. Only amunal peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946 1947 1948 1949 1950	June 4, 1946 May 29, 1947 May 21, 1948 June 10, 1949 June 6, 1950	4.35 4.91 4.67 3.92 3.83	268 464 474 223 200	1952 1953 1954 1955	June 6, 1952 June 2, 1953 May 17, 1954 May 20, 1955	4.50 4.29 3.94 4.08	400 308 165 221
1951	May 27, 1951	3.77	184	1956	May 7, 1956	3.85	160

1000. Big Creek near Collbran, Colo.

<u>Location</u>.--Lat 39°12', long 107°58', in $N\frac{1}{2}$ sec.14, T.10 S., R.95 W., 3 miles south of Collbran and $4\frac{1}{2}$ miles upstream from mouth.

Drainage area .-- 25.3 sq mi.

Gage.--Nonrecording prior to Sept. 10, 1942, at site half a mile upstream at different datum; recording thereafter. Altitude of gage is 6,900 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 280 cfs.

Remarks.--Diversions for irrigation of several thousand acres. Diversions substantially affect peak flows. Peak flows are principally from snowmelt. Records for May 1937 to April 1941 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 20, 1939	1.90	126	1942	May 31, 1942	3.00	750
1940	May 9,13, 1940	2.40	283	1943	Aug. 8, 1943	3.60	248
1941	May 27, 1941	2.00	400	1944	June 10, 1944	4.68	590
1341	May 27, 1941	2.00	400				

1005. Cottonwood Creek at upper station, near Molina, Colo.

 $\underline{Location}$.--Lat 39°07'40", long 107°59'40", in NE $_4^1SW_4^1$ sec.3, T.11 S., R.95 W., 6 miles southeast of Molina and 7 miles upstream from mouth.

Drainage area. -- 16 sq mi, approximately.

<u>Gage</u>.--Recording. Parshall flume 100 ft downstream at datum 2.90 ft lower prior to Oct. 11, 1951. Altitude of gage is 7,685 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 45 cfs.

Remarks. -- Flow regulated by several small reservoirs (combined capacity, 3,200 acre-ft) storing water for irrigation. No diversion above station. Regulation could substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1946	May 12, 1946	2.80	81	1953	May 27, 1953	4.41	71
1947	May 6, 1947	2.66	79	1954	Aug. 12, 1954	4.36	56
1948	May 18, 1948	3.01	101	1955	May 14, 1955	4.34	42
1949	June 18, 1949	2.52	68	1	,		
1950	June 3, 1950	2.43	61	1956	May 4.6. 1956	4.24	_
		ì			June 5, 1956	-	37
1951	May 20, 1951	2.08	34	1957	June S. 1957	4.60	84
1952	May 5, 1952	4.50	54		,		

1010. Cottonwood Creek near Molina, Colo.

<u>Location</u>.--Lat 39°10', long 108°01', in NW_{4}^{1} sec.29, T.10 S., R.95 W., 3 niles upstream from mouth and 3 miles southeast of Molina.

Drainage area. -- 19.7 sq mi.

Gage.--Nonrecording. At datum 0.5 ft higher prior to May 27, 1941. Altitude of gage is 6,560 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 60 cfs.

Remarks. -- Several small storage reservoirs and a few small diversions for irrigation of about 2,600 acres. Diversions and regulation could substantially affect peak flows. Peak flows are principally from snowmelt. Records for May 1937 to October 1940 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges of Cottonwood Creek near Molina, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937 1938 1939 1940	July 9, 1937 Apr. 25, 1938 July 3, 1939 May 9, 1940	2.10 2.25 1.52 1.64	94 36 15 15	1941 1942 1943	May 13, 1941 May 26, 1942 May 29, June 2, 1943	4.00 3.20 1.20	144 120 16

1015. Bull Creek at upper station, near Molina, Colo.

Location.--Lat 39°07', long 108°02', in SW_{Ψ}^{1} sec.5, T.11 S., R.95 W., on right bank 6 miles upstream from mouth and 6 miles south of Molina.

Drainage area. -- 10 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,200 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 50 cfs.

Bankfull stage .-- 6 ft.

Remarks.--Flow regulated by several small reservoirs for irrigation. Diversions for irrigation of 20 acres. Regulation substantially affects floodflows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Sept. 7, 1945	2.07	58	1950	May 21, 1950	1.93	38
1946 1947 1948 1949	June 7, 1946 May 10, 1947 May 19, 1948 June 18, 1949	1.84 2.14 2.42 2.18	34 65 82 62	1951 1952 1953	May 28, 1951 June 10, 1952 May 28, 1953	1.85 2.51 2.27	30 100 72

1020. Bull Creek near Molina, Colo.

<u>Location</u>.-Lat 39°08', long 108°03', in NE $\frac{1}{4}$ sec.6, T.11 S., R.95 W., 4 miles upstream from mouth and 4 miles south of Molina.

Drainage area. -- 9.7 sq mi, approximately.

Gage .-- Nonrecording. Altitude of gage is 7,100 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 70 cfs.

Remarks.--Several small storage reservoirs and small diversions for irrigation.

Records not equivalent to those for "at upper station near Molina" because of diversions between the two. Regulation substantially affects floodflows. Peak flows are principally from snowmelt. Records for May 1937 to October 1940 furnished by Bureau of Reclamation. Only annual peaks are shown.

Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
May 14, 1937	2.70	36	1940	May 9, 1940	2.80	28
May 29, 1938 June 1,13, 1938	3.40	- 66 28	1941	May 18, 1941	3.90	100
	May 14, 1937 May 29, 1938	Date Gage height (feet) Nay 14, 1937 2,70 May 29, 1938 - June 1,13, 1938 3.40	Date Gage height (feet) Discharge (cfs) Nay 14, 1937 2.70 36 May 29, 1938 - 6 June LLE 1938 3.40 66	Date Gage height (feet) Discharge (cfs) Water year Nay 14, 1937 Ang 29, 1938 June L.E. 1938 June 1.E. 1938 Ang 29, 1	Date Gage height (feet) Discharge (cfs) Water year Date Nay 14, 1937 29, 1938 3.40 270 36 1940 May 9, 1940 May 29, 1938 3.40 66 1941 May 18, 1941	Date Gage height (feet) Discharge (cfs) Water year Date Gage height (feet) Nay 14, 1937 2.70 36 1940 May 9, 1940 2.80 May 29, 1938 - - - 66 1941 May 18, 1941 3.90

1040. Coon Creek near Mesa, Colo.

Location.--Lat 39°07', long 108°08', in NE_{τ}^{1} sec.8, T.11 S., R.96 W., 3 miles south of Mesa and 5 miles upstream from mouth.

Drainage area. -- 10.0 sq mi.

Gage .-- Nonrecording. Altitude of gage is 6,910 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 55 cfs.

Remarks.--A few small reservoirs above station. One small diversion for irrigation. Diversion and regulation probably affect peak flows substantially. Peak flows are principally from snowmelt. Records for May 1937 to October 1940 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937 1938 1939 1940	May 12, 15, 1937 May 28, 1938 May 5, 1939 May 9, 10, 11, 12, 1940	1.40 1.58 1.30 1.50	19 25 15 30	1941 1942 1943	May 13, 1941 May 26, 1942 Apr. 29, 1943	1.86 2.12 1.00	37 64 14

1045. Mesa Creek near Mesa, Colo.

Location.--Lat 39°05', long 108°07', in SW_u^1 sec.16, T.11 S., R.96 W., on right bank an eighth of a mile upstream from unnamed stream, $5\frac{1}{2}$ miles southeast of Mesa, and $7\frac{1}{2}$ miles upstream from mouth.

Drainage area. -- 7 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 29, 1943, at site half a mile upstream at different datum; recording thereafter. Altitude of gage is 7,400 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 50 cfs.

Bankfull stage .-- 21 ft.

Remarks. -- Flow partly regulated by small reservoirs. No diversion. Regulation substantially affects peak flows. Peak flows are principally from snowmelt. Records for May 1937 to October 1940 furnished by Bureau of Reclamatior. Only annual peaks are shown.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937 1938	May 15, 1937 May 28, 1938	1.2 1.4	34 49	1950	May 16, 1950	1.20	23
1939	May 4, 1939	1.2	33 38	1951	Jan. 31, 1951 June 1, 1951	a3.41	_ 27
1940	May 10, 11, 12, 13,1940	1,55	36	1952	Feb. 25, 1952 June 14, 1952	al.92	51
1941 1942	May 12, 1941 May 26, 1942	2.00 1.66	140 100	1953 1954	May 28, 1953 Mar. 15, 1954	1.57 a3.05	45 -
1943 1944 1945	May 4, 1943 May 23, 1944 June 16, 1945	1.45 1.83 1.43	35 71 38	1955	May 11, 1954 Feb. 3, 1955 May 6, 1955	a2.07	29 - 36
1946	Jan. 27, 1946 Apr. 28, 1946	a2.25	- 26	1956	Feb. 12, 1956 June 5, 1956	a2.06	- 29
1947	Dec. 31, 1946 May 10, 1947	a2.45	- 35	1957 1958	June 15, 1957 May 22, 1958	1.94 1.88	74 57
1948	Dec. 12, 1947 May 20, 1948	a2,23	- 46	1959	Nov. 19, 1958 May 16, 1959	al.96	22
1949	Dec. 25, 1948 July 24, 1949	a2.33	33	1960	May 15, 1960	1.95	30

a Backwater from ice.

1050. Plateau Creek near Cameo, Colo.

<u>Location</u>.--Lat 39°11',00", long 108°16'10", in $NW_{u}^{\frac{1}{4}}SW_{u}^{\frac{1}{4}}$ sec.18, T.10 S., R.97 W., on left bank 300 ft from State Highway 65, 1.1 miles upstream from mouth, and 4 miles northeast of Cameo.

Drainage area .-- 604 sq mi.

<u>Gage.</u>--Nonrecording prior to Aug. 27, 1936; recording thereafter. Altitude of gage is 4,836 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 3,000 cfs.

Bankfull stage .-- 8 ft.

Remarks. -- Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 25,000 acres, and return flow from irrigated areas. Diversions and regulation probably affect peak flows substantially most years. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	May 6, 1936	4.40	1,540	1950	Feb. 10, 1950	a5,17	_
1937	May 16, 1937	5.08	1,850	li -	June 1, 1950	-	1,490
1938	May 29, 1938	6.07	2,550	il .	1		·
1939	Feb. 23, 1939	a5.11	'-	1951	May 28, 1951	4.94	1,480
	May 11, 1939	-	1,130	1952	Dec. 30, 1951	a7.63	-
1940	May 13, 1940	5.08	1,800	! }	June 7, 1952	-	2,280
			1	1953	May 28, 1953	5.71	1,830
1941	May 14, 1941	7.60	3,620	1954	Oct. 23, 1953	4.03	940
1942	May 27, 1942	7.73	3,920	1955	May 15, 1955	4.77	1,310
1943	June 2, 1943	5.20	1,920		1	l	
1944	May 24, 1944	5.76	2,320	1956	July 30, 1956	7.00	2,820
1945	May 27, 1945	5.15	1,830	1957	June 15, 1957	6.64	2,540
	1		1	1958	May 24, 1958	6.49	2,440
1946	Feb. 21, 1946	a4.41	-	1959	May 16, 1959	4.06	965
	June 7, 1946		1,040	1960	May 13, 1960	4.76	1,270
1947	May 9, 1947	5.99	2,500	i	1	1	-
1948	May 19, 1948	7.09	3,450	1961	May 27, 1961	4.34	1,030
1949	May 16, 1949	4.57	1,370	1962	May 12, 1962	5.24	1,510

a Backwater from ice.

COLORADO RIVER MAIN STEM

1060. Colorado River near Palisade, Colo.

Location. --Lat 39°08', long 108°20', in sec.3, T.11 S., R.98 W., at former diversion dam $2\frac{1}{2}$ miles upstream from Palisade, 5 miles downstream from Plateau Creek, and $5\frac{1}{2}$ miles downstream from diversion dam for Government high-line canal.

Drainage area. -- 8,790 sq mi, approximately.

Gage.--Nonrecording. At site half a mile downstream at different datum prior to Nov. 30, 1931. Altitude of gage is 4,740 ft (from map of Grand Valley Irrigation project).

 $\underline{\underline{\mathtt{Stage-discharge\ relation}}}$.--Defined by current-meter measurements below 40,000 cfs.

Remarks.--Transmountain diversions and small storage reservoirs above station.

Diversions for irrigation of about 185,000 acres. Also diversions to Government high-line, Orchard Mesa, Stub, and Price Canals. Diversions and regulation probably affect peak flows substantially. Peak flows are principally from snowmelt. Records for 1915-33 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges of Colorado River near Palisade, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1902	May 17, 1902	18.7	18,400	1918	June 14, 1918	-	49,500
1903	June 18, 1903	20.2	26,500	1919	May 30, 1919	-	22,000
1904	May 25, 1904	20.1	25,300	1920	June 1, 1920	-	43,000
1905	June 5, 1905	22.3	37,200	ļ			i
		1		1921	June 16, 1921	24.4	52,400
1906	June 14, 1906	22.3	37,200	1922	May 29, 1922	21.3	31,300
1907	June 18, 1907	21.3	30,800	1923	June 17, 1923	21.3	31,300
1908	June 12, 1908	19.4	21,300	1924	June 16, 1924	22.4	37,900
1909	June 20, 1909	23.3	43,400	1925	May 31, 1925	18.9	19,200
1910	June 1, 1910	20.6	27,400	l.	·		
			[1926	June 7, 1926	21.8	34,300
1911	June 9, 1911	20.3	26,300	1927	May 20, 1927	21.3	31,300
1912	June 10, 1912	23.9	45,200	1928	June 1, 1928	23,35	44,400
1913	June 1, 1913	19.5	21,800	1929	June 10, 1929	22.6	38,900
1914	June 3, 1914	23.2	43,200	1930	June 1, 1930	20.5	26,800
1915	June 21, 1915	19.4	21,500	1			
				1931	June 8, 1931	17.9	15,200
1916	June 13, 1916	20.4	26,300	1932	May 23, 1932	7.3	30,800
1917	June 19, 1917	24.2	51,000	1933	June 2. 1933	8.2	37,100

GUNNISON RIVER BASIN

1070. Taylor River at Taylor Park, Colo.

 $\underline{\text{Location.}\text{--Lat }38\,^\circ\text{Sl'00"}}$, long 106 °34 '20", in sec.8, T.14 S., R.82 W., at bridge half a mile upstream from Texas Creek.

Drainage area. -- 121 sq mi.

Gage .-- Recording. Altitude of gage is 9,280 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 480 cfs.

Remarks.--No diversion above station. Peak flows are principally from snowmelt.

Records for 1929-33, furnished by State engineer of Colorado. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	May 21, 1930 May 30, 1930		398 713	1932	June 26, 1932	2.52	774
	June 12, 1930	2.53	696	1933	May 21, 1933 May 31, 1933	2.20	560 1,020
1931	May 17, 1931 May 25, 1931	1.86	337 314		June 11, 1933	2.62	876
	June 3, 1931	1.88	346	1934	May 9, 1934	1.90	304
1932	May 22, 1932	2.22	572))	1		

1090. Taylor River below Taylor Park Reservoir, Colo.

Location. -- Lat 38°48'50", long 106°36'40", in sec.24, T.14 S., R.83 W., cn left bank 50 ft downstream from bridge on State Highway 306, 500 ft downstream from Taylor Park Reservoir Dam, 3\(\frac{1}{4}\) miles upstream from Lottis Creek, and 16 miles northeast of Almont.

Drainage area. -- 245 sq mi.

Gage.-Recording. At site 1,000 ft downstream at datum 1.00 ft lower prior to Nov. 11, 1952. Supplementary nonrecording gage Oct. 15, 1946, to May 5, 1952, just downstream from reservoir outlet at different sites and datums. Datum of gage is 9,169.67 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 2,300 cfs.

Remarks.--Flow regulated by Taylor Park Reservoir. One small diversion from Willow Creek above reservoir. Regulation substantially affects peak flows. Only annual peaks are shown.

Peak stages and discharges of Taylor River below Taylor Park Reservoir, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	July 22, 1939	3.48	814	1951	Sept.12, 1951	3.93	915
1940	Oct. 3, 1939	3.50	825	1952	June 16, 1952	5.20	1,540
				1953	Sept. 8, 1953	5.67	948
1941	Sept.11-14, 1941	3.37	754	1954	Aug. 31, 1954	5.55	855
1942	June 19, 1942	4.25	1.220	1955	Sept.14, 1955	5.58	896
1943	June 11. 1943	3.81	935	1	1	1	\
1944	Sept.11, 1944	3.84	950	1956	Sept. 8, 1956	5.60	936
1945	June 25. 1945	3.21	653	1957	July 1, 1957	7.56	2,270
			i i	1958	Sept. 4, 1958	5.27	735
1946	June 9, 1946	4.03	1,060	1959	Sept. 9, 1959	5.47	851
1947	June 21, 1947	4.48	1,270	1960	Aug. 30, 1960	5.70	990
1948	June 4, 1948	4.80	1,440	1	} - '	{	1
1949	June 19, 1949	4.56	1,190	1961	July 26, 1961	5.17	712
1950	Sept. 8, 1950	3.88	905	1962	June 22, 1962	5.96	1,150

1100. Taylor River at Almont, Colo.

Location.--Lat 38°40', long 106°51', in sec.22, T.51 N., R.1 E., on right bank at Almont, 10 ft downstream from bridge on State Highway 306 and 800 ft upstream from confluence with East River.

Drainage area. -- 440 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 16, 1922; recording thereafter. Datum of gage 1s 8,010.76 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 2,300 cfs.

Remarks.--Flow partly regulated by Taylor Park Reservoir 24 miles upstream.

Diversions for irrigation of about 360 acres. Diversion and regulation substantially affect peak flows. Records for 1932-33, furnished by State engineer of Colorado. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	May 28, 1913	3.60	1,750	1939 1940	June 1, 1939 Oct. 3, 1939	3.35 2.97	1,180 856
1916	June 17, 1916	4.20	2,980				
1919	Feb.2, 3,1919 May 21, 22, 26, 27, 28, 29, 30, 1919	a3.90 -	1,670	1941 1942 1943 1944 1945	Sept. 5, 1941 June 13, 1942 June 11, 1943 June 11, 1944 June 25, 1945	2.90 4.04 3.61 3.59 2.97	752 1,800 1,410 1,390 864
1920	June 9, 1920	5.00	3,760	1946 1947	June 8, 1946 June 21, 1947	3.64 3.95	1,440 1,680
1921 1922 1923 1924 1925	June 15, 1921 May 30, 1922 June 16, 1923 June 14, 1924 May 28, 1925	5.0 4.15 4.1 4.3 3.4	3,680 2,420 2,270 2,670 1,290	1948 1949 1950	June 4, 1948 June 19, 1949 Jan. 7, 1950 Sept. 8, 1950	4.34 4.16 a3.49	2,120 1,940 - 945
1926 1927 1928 1929	June 7, 1926 May 22, 1927 May 31, 1928 May 26, 1929	4.1 3.84 4.24 3.96	2,320 2,080 2,780 2,320	1951 1952 1953 1954	June 27, 1951 June 16, 1952 June 13, 1953 Aug. 31 to Sept. 4,1954	3.25 4.50 3.28 3.20	1,040 2,280 1,050 914
1930	Jan. 10, 1930 June 10, 1930	a4.75	2,040	1955	Sept.17, 1955	3,24	1,030
1931	Jan. 20, 1931 May 18, 1931	a2.92	- 824	1956 1957	June 14, 1956 Sept.5-11,1956 July 1, 1957	3.40 5.32	1,050 - 3,590
1932 1933 1934 1935	May 18, 1932 June 5, 1933 May 10, 1934 June 16, 1935	3.64 4.05 3.06 5.04	1,440 1,820 892 2,390	1958 1959 1960	June 6, 1958 Apr. 25, 1959 Sept. 7, 1959 June 18, 1960	3.40 b4.32 3.39	1,380 876 1,370
1936 1937 1938	May 26, 1936 May 16, 1937 June 6, 1938	4.28 3.86 4.16	2,020 1,560 1,920	1961 1962	Apr. 25, 1961 May 13, 1962	2.77 3.84	824 1,820

a Backwater from ice. b Backwater from cofferdam.

1105. East River near Crested Butte, Colo.

Location. --Lat 38°51'50", long 106°54'20", in NE $\frac{1}{4}$ sec.5, T.14 S., R.85 W., at highway bridge, 1.2 miles downstream from Brush Creek, 4 miles upstream from Slate River, and $4\frac{1}{2}$ miles east of Crested Butte.

Drainage area. -- 89.2 sq mi.

June 22, 1943

May 31, 1944 June 22, 1944

June 14, 1945

1944

1945

Gage. -- Nonrecording prior to Oct. 17, 1941; recording thereafter. At site 1 mile downstream at different datum May 4 to Nov. 20, 1940. Altitude of gage is 8,880 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Remarks.--Diversions for irrigation of about 600 acres. Diversions do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 870 cfs.

Peak stages and discharges

Gage Gage Water Discharge Discharge Water height (feet) Date height Date (cfs) (cfs) vear year (feet) 1946 2.56 918 1940 May 12, 1940 2.00 470 June 18, 1946 1,020 June 9, 1947 June 20, 1947 882 June 18, 1941 2.80 1947 2.56 1941 2.62 926 May 26, 1942 June 12, 1942 2.55 975 1942 May 19, 1948 June 3, 1948 1,270 1,210 2,57 989 1948 2.88 2.74 1943 June 1, 1943 June 10, 1943 912 2.54 928 1949 June 17, 1949 2.71 1,160 2.56

1950

1951

June 1, 1950 June 16, 1950

May 28, 1951 June 18, 1951 2.48

2.55

2.69

2.90

904

960

1,000

1,170

936

904

870

1,060

1110. Coal Creek near Crested Butte, Colo.

Location. -- Lat 38°51'20", long 107°03'15", in sec.1, T.14 S., R.87 W., 200 ft from State Highway 135, 0.2 mile downstream from Elk Creek, and 4 miles west of Crested Butte.

Drainage area. -- 8.5 sq mi, approximately.

2,57

2.53

2.72

2.50

<u>Gage</u>.--Recording. Datum of gage is 9,495.80 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 130 cfs.

Remarks.--Some flow released from storage in Lake Brennan (Anthracite Creek basin) for municipal purposes of town of Creeted Butte. No diversion above station. Inflow does not substantially affect peaks. Peak flows are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942 1943	May 26, 1942 June 1. 1943	2.93 2.85	207 191	1945	June 14, 1945	2.79	246
1944	June 20, 1944	2.82	187	1946	June 8, 1946	2.58	204

1115. Slate River near Crested Butte, Colo.

Location. -- Lat 38°52'00", long 106°57'50", in sec.2, T.14 S., R.86 W., on right bank half a mile downstream from Coal Creek and 1 mile east of Crested Butte.

Drainage area .-- 69.0 sq mi.

Gage.--Nonrecording prior to Oct. 15, 1941; recording thereafter. Datum of gage is 8,826.88 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1,200 cfs.

Bankfull stage .-- 3 ft.

Remarks.--Diversions above station for irrigation of about 1,370 acres. Diversions do not substantially affect peak flows. Peak flows are principally from snowmelt. Records for Apr. 18 to Nov. 19, 1940, furnished by Bureau of Reclamation. Base for partial-duration series, 950 cfs.

			Peak stages a	and disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 11, 1940	3.54	696	1947	May 8, 1947 June 9, 1947	3.90 3.85	1,010 1,040
1941	May 13, 1941	3.98	1,240		June 21, 1947	3.82	1,010
1942	May 27, 1942	3.97	1,180	1948	May 22, 1948 June 4, 1948	4.13 4.06	1,130 1,080
1943	June 2, 1943	3.98	1,200	1949	June 18, 1949	4.07	1,090
1944	May 16, 1944 May 31, 1944	3.87 3.89	1,070 1,000	1950	June 2, 1950	3.86	882
	June 11, 1944	3.86	970	1951	May 29, 1951	4.06	1,020
1945	June 15, 1945	3.88	930		June 19, 1951	4.05	1,020

1120. Cement Creek near Crested Butte, Colo.

1,040

3.78

Location.--Lat 38°50'00", long 106°49'30", in sec.13, T.14 S., R.85 W., on right bank near Pioneer Resort, 14 miles upstream from Ward Gulch and 9 miles southeast of Crested Butte.

Drainage area. -- 27.7 sq mi.

June 9, 1946

1946

<u>Gage.</u>--Nonrecording. At site half a mile downstream at different datum Apr. 17, 1940, to Oct. 18, 1941; recording thereafter. Altitude of gage is 9,050 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 260 cfs.

Bankfull stage .-- 4 ft.

Remarks. -- Diversions for irrigation of 80 acres. Diversions do not substantially affect peak flows. Peak flows are principally from snowmelt. Records for April to November 1940 furnished by Bureau of Reclamation. Base for partial-duration series, 160 cfs.

Peak stages and discharges of Cement Creek near Crested Butte, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 11, 1940	8.35	120	1947	May 26, 1947 June 8, 1947	2.51 2.95	160 269
1941	May 17, 1941	8.60	160		June 19, 1947	2.68	201
1942	June 3, 1942	2.74	218	1948	May 21, 1948 June 2, 1948	3.43 3.47	348 358
1943	June 1, 1943 June 17, 1943	2.57 2.43	185 163	1949	June 17, 1949	3.00	290
1944	May 30, 1944 June 10, 1944	2.78 2.79	239 232	1950	June 1, 1950 June 6, 1950	2.60 2.67	172 189
1945	June 14, 1945	2.43	155	1951	May 28, 1951	2.82	225 265
1946	June 7, 1946	2.59	170		June 18, 1951	2.90	265

1125. East River at Almont, Colo.

Location. --Lat 38°40', long 106°51', in sec.22, T.51 N., R.1 E., on left bank at Almont, 200 ft upstream from bridge on State Highway 135, and 400 ft upstream from confluence with Taylor River.

Drainage area. -- 295 sq mi.

Gage.--Nonrecording at bridge 200 ft downstream at different datum prior to Apr. 30, 1922; recording thereafter. Datum of gage is 8,006.29 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 3.600 cfs.

Bankfull stage. $-3\frac{1}{2}$ ft.

Remarks.--Diversions for irrigation of about 7,400 acres. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 1,600 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 1, 11, 1913	3.00	1,520	1942	June 19, 1942	3.86	1,760
1916	June 17, 1916	3.80	3,220	1943	May 3, 1943 June 2, 1943	3.96 4.52	1,740 2,450
1918	June 13, 1918	5.70	6,000		1		, ·
1919	May 28, 1919	2.96	1,780	1944	May 16, 1944 May 24, 1944 May 31, 1944	4.10 4.05 4.22	1,920 1,860 2,060
1920	June 9, 1920	5.2	4,220		June 11, 1944 June 21, 1944	3.95 3.97	1,740 1,760
1921	June 15, 1921	6.60	6,500	1945	June 15, 1945	3.95	1 940
1935	May 28, 1935 June 14, 1935	4.11 5.25	1,825 2,840	1945	June 18, 1946	4.08	1,840
1936	May 6, 1936 May 16, 1936	5.12 4.86	2,830 2,550	1947	May 9, 1947 June 9, 1947 June 21, 1947	4.22 4.18 4.14	2,100 2,050 2,000
1937	May 18, 1937 May 30, 1937	4.70 4.46	2,190 1,930	1948	May 22, 1948	5,12	3,050
1938	June 4, 1938 June 22, 1938	4.86 4.52	2,620 2,210	1949	June 4, 1948 June 18, 1949	4.80 4.63	2,670 2,660
1939	May 23, 1939	3,92	1,590	1950	May 23, 1950 June 2, 1950	3.63 3.82	1,600 1,770
1940	May 11, 1940	3.56	1,220		June 7, 1950 June 12, 1950	3.72 3.68	1,680 1,640
1941	May 14, 1941 May 27, 1941 June 20, 1941	4.70 3.87 3.80	3,240 1,980 1,880	1951	May 29, 1951 June 19, 1951	4.18 4.19	2,380 2,520
1942	May 27, 1942 June 12, 1942	4.28 4.05	2,380 2,010	1952	May 5, 1952 May 16, 1952	4.25 4.17	2,570 2,480

Gage Water Discharge Water Discharge Date height Date height (feet) year (cfs) year (cfs) (feet) 1952 June 8, 1952 June 16, 1952 5.12 3,830 1957 5,00 July 27, 1957 1,660 5.00 3.650 1958 12, 1958 23, 1958 7, 1958 5.55 1,810 Mav 1953 May 29, 1953 June 14, 1953 3.59 2,090 6.45 2,720 2,700 Mav 4.28 June 1954 May 22, 1954 1.73 1,170 1959 June 8, 1959 5.12 1,610 1955 June 9, 1955 4.75 1,540 1960 June 5, 1960 4.97 1,640 May 22, 1956 June 3, 1956 1956 4.94 5.33 1,890 2,320 1961 May 26, 1961 4.96 1,650 May 12, 1962 June 14, 1962 June 22, 1962 2,590 2,210 2,250 1962 6.01 June 8, 1957 June 29, 1957 July 19, 1957 1957 6.98 3,750 5.61 7.41 5.40 4,260 5.65

Peak stages and discharges of East River at Almont, Colo .-- Continued

1130. Castle Creek near Baldwin, Colo.

Location.--Lat 38°46'15", long 107°05'20", in sec.2, T.15 S., R.87 W., $1^{\frac{3}{4}}$ miles upstream from mouth and 2 miles west of Baldwin.

Drainage area. -- 17.5 sq mi.

Gage .-- Recording. Altitude of gage is 8,850 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 90 cfs.

Bankfull stage . -- 8 ft.

Remarks.--Diversions for irrigation of about 100 acres. Diversion does not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 220 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	July 23, 1945 Aug. 3, 1945	6.62 5.86	362 242	1948	May 19, 1948 June 3, 1948	5.67 5.60	276 265
1946	June 17, 1946	5.65	264	1949	June 18, 1949 June 23, 1949	6.12 6.36	328 384
1947	May 8, 1947 June 8, 1947 June 21, 1947 July 3, 1947	5.71 5.55 5.69 5.52	276 244 272 238	1950	June 17, 1950	5.63	209

1135. Ohio Creek near Baldwin, Colo.

<u>Location</u>.--Lat $38^{\circ}42^{\circ}$, long $107^{\circ}00^{\circ}$, in $SW^{\frac{1}{4}}$ sec. 34, T.15 S., R.86 W., 800 ft downstream from Mill Creek, $5\frac{1}{2}$ miles southeast of Baldwin, and 11 miles upstream from mouth.

Drainage area. -- 124 sq mi.

Gage.--Nonrecording prior to Apr. 3, 1942; recording thereafter. Altitude of gage is 8,180 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 560 cfs.

Remarks. --Diversions for irrigation of about 4,000 acres. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Records for Apr. 17 to Nov. 15, 1940, furnished by Bureau of Reclamation. Base for partial-duration series, 450 cfs.

Peak stages and discharges of Ohio Creek near Baldwin, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 10, 1940	2.54	384	1948	Apr. 29, 1948 May 6, 1948	3.91 3.37	930 698
1941	May 13, 1941	4.20	940		May 19, 1948 June 3, 1948	4.65 3.43	1,260 722
1942	May 10, 1942	2.66	456	1	tune 3, 1340	3.43	166
	May 27, 1942	3.44	736	1949	May 15, 1949 June 18, 1949	2.78 3.63	484 776
1943	May 3, 1943 June 2, 1943	3.55 2.95	808 592		June 23, 1949	3.72	807
1944	May 17, 1944	4.21	1,040	1950	May 22, 1950 June 3, 1950	2.77 2.76	493 490
	May 24, 1944 June 11, 1944	3.96 2.87	944 530	1959	May 14, 1959	2.65	469
1945	May 12, 1945 May 26, 1945 June 15, 1945	3.13 2.85 2.69	620 522 466	1960	Apr. 10, 1960 May 12, 1960	3.55 2.67	793 485
	July 25, 1945	2.85	522	1961	May 22, 1961	2.22	383
1946	June 18, 1946	2.59	432	1962	Apr. 20, 1962 May 9, 1962	3.32 3.84	822 1,010
1947	May 8, 1947	3.92	948		June 14, 1962	2.55	470
	May 22, 1947	2.81	528	1	June 23, 1962	2.53	470
	June 9, 1947 June 21, 1947	2.87 2.81	550 528				

1140. Ohio Creek near Gunnison, Colo.

Location. -- Lat 38°35', long 106°56', in sec.23, T.50 N., R.1 W., half a mile upstream from mouth and 2 miles northwest of Gunnison.

Drainage area. -- 150 sq mi.

Gage .-- Recording. Altitude of gage is 7,720 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements below 540 cfs.

Remarks.--Diversions for irrigation of about 10,000 acres. Diversions affect peak flows substantially. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 14, 1945	4.98	498	1948 1949	May 20, 1948 June 18, 1949	6.15 5.84	992 853
1946 1947	June 17, 1946 May 8, 1947	4.71 5.62	404 748	1950	May 23, 1950	4.72	410

1145. Gunnison River near Gunnison, Colo.

Location. --Lat 38°32'50", long 106°57'00", on line between secs. 34 and 35, T.50 N., R.1 W., on right bank 1,500 ft downstream from Antelope Creek and 1 mile west of Gunnison.

Drainage area. -- 1,010 sq mi, approximately.

Gage.--Recording or nonrecording Nov. 25, 1910, to Dec. 31, 1928, at bridge about a mile downstream at various datums; recording thereafter. Altitude of gage is 7,670 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 5,000 cfs.

Bankfull stage .-- 31 ft.

Remarks.--Flow partly regulated by Taylor Park Reservoir since 1938. Diversions for irrigation of about 22,000 acres. Since 1938, diversions and regulation probably affect peak flows substantially. Only annual peaks are shown.

Peak stages and discharges of Gunnison River near Gunnison, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912 1913 1914	June 6, 1912 May 27, 1913 June 1, 1914 June 14, 1916	4.15 2.55 3.9 3.35	5,880 3,180 5,680 4,890	1946 1947 1948 1949 1950	June 8, 1946 June 21, 1947 May 22, 1948 June 19, 1949 June 3, 1950	4.84 5.07 5.58 5.94 4.31	3,480 3,950 5,600 5,190 2,560
1917 1918 1919	June 22, 1917 June 13, 1918 May 21,22,27, 28, 29,1919	4.20 4.05 3.8	6,250 11,400 3,400	1951 1952 1953	May 29, 1951 June 16, 1952 June 14, 1953	4.91 6.07 5.26	3,320 5,710 4,220
1920	June 11, 1920	5.15	7,680	1954 1955	May 23, 1954 June 9, 1955	3.13 3.72	1,330 1,970
1921 1922 1923 1924 1925	June 12, 1921 May 30, 1922 May 28, 1923 June 14, 1924 Feb. 20, 1925 May 29, 1925	5.0 4.4 4.50 4.3 4.05	6,600 5,200 5,330 4,750 - 2,590	1956 1957 1958 1959 1960	June 3, 1956 July 1, 1957 May 28, 1958 June 7, 1958 June 9, 1959 June 18, 1960	4.49 6.74 5.52 - 3.96 4.37	3,260 9,320 - 4,670 2,080 2,690
1926 1927 1928	June 7, 1926 May 19, 1927 May 30, 1928	3.9 4.2 4.5	4,140 5,090 5,750	1961 1962	May 28, 1961 May 13, 1962	3.83 5.77	2,030 5,440
1945	June 25, 1945	4.32	2,620				

1155. Tomichi Creek at Sargents, Colo.

Location. --Lat 38°24', long 106°25', in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.21, T.48 N., R.5 E., on right bank 300 ft from U.S. Highway 50, half a mile downstream from Marshall Creek, and three-quarters of a mile south of Sargents.

Drainage area .-- 155 sq mi.

Gage.--Recording or nonrecording May 12, 1917, to Sept. 30, 1922, at railroad bridge 1,000 ft upstream at different datum; recording thereafter. At datum 1.00 ft higher Apr. 18, 1938, to Sept. 9, 1953. Altitude of gage is 8,420 ft (from railroad elevation).

Stage-discharge relation.--Defined by current-meter measurements below 600 cfs. Bankfull stage.--45 ft.

Remarks.--Larkspur ditch diverts water above station to Arkansas River basin.

Diversions for irrigation of about 1,900 acres. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 16, 1917	4.05	662	1943	May 4, 1943 June 2, 1943	2.47 2.23	408 342
1918	May 29, 1918	3.4	410		June 11, 1943 June 30, 1943	2.32 1.80	366 230
1919	May 29, 1919	3.55	475	1944	May 17, 1944	2.21	363
1920	June 1, 1920	3.9	565	1944	June 10, 1944	2.38	461
1921	June 9, 1921	4.05	792	1945	May 14, 1945 May 28, 1945	1.78 2.11	249 335
1922	May 28, 1922	-	340	1		l	
1938	Apr. 21, 1938	1.91	272	1946	June 6, 1946	1.35	146
1000	May 30, 1938	2.48	424	1947	Apr. 4, 1947 May 11, 1947	a2.72	- 368
1939	May 10, 1939	1.89	291		June 9, 1947 June 20, 1947	2.35	311 292
1940	May 21, 1940	1.42	167	1948	May 22, 1948	2.96	548
1941	May 14, 1941	2.50	445	1949		ļ	
1942	Apr. 14, 1942	2.36	330	1949	Apr. 23, 1949 May 20, 1949	1.39	212 288
	Apr. 23, 1942	2.05	268		May 30, 1949	2.00	342
	May 12, 1942	2.27	391		June 9, 1949	2.11	370
a Da	May 27, 1942	3.28	664	1	June 19, 1949	2.19	402
a Ba	ckwater from ice.						

Peak stages and discharges of Tomichi Creek at Sargents, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Apr. 2, 1950 June 3, 1950	a2.20 1.17	- 178	1956	June 2, 1956	2.20	285
	ouns e, es			1957	May 9, 1957	2.47	351
1951	Mar. 28, 1951	a2.81	-	1	May 20, 1957	2.00	213
	May 21, 1951	1.65	242	i	June 6, 1957	3.66	804
	May 29, 1951	2.56	440	1	June 21, 1957	3.15	644
	June 19, 1951	1.45	218	i	July 18, 1957	1.96	234
	-				July 23, 1957	2.14	280
1952	Apr. 26, 1952	1.50	275	1	July 27, 1957	2.29	319
	May 6, 1952	1.95	425	1			
	May 16, 1952	1.80	408	1958	Apr. 22, 1958	1.90	232
	June 8, 1952	2.29	627		May 27, 1958	3.12	628
1953	May 29, 1953	2.27	591	1959	Apr. 5, 1959	a3.09	-
	June 13, 1953	1.61	393	l	June 8, 1959	1.69	168
	June 19, 1953	1.62	3 96				
				1960	Mar. 24, 1960	a3.00	
1954	Apr. 1, 1954	a2.31			Apr. 6, 1960	2.10	293
	May 11, 1954	1.42	89	1	May 13, 1960	1.96	245
				1	June 4, 1960	2,15	306
1955	Apr. 10, 1955	a3.60	-				007
	May 24, 1955	1.72	126	1961	June 1, 1961	2,08	287
1956	Apr. 1, 1956	a3.03	-	1962	Apr. 17, 1962	2.34	348
j	May 24, 1956	2.20	288	1	May 13, 1962	2.61	474

a Backwater from ice.

1160. Tomichi Creek near Doyleville, Colo.

Location.--Lat 38°25', long 106°30', in NE_u^1 sec.22, T.48 N., R.4 E., 100 f's south of U.S. Highway 50, a quarter of a mile downstream from Tie Creek, 1_u^2 miles upstream from Needle Creek, and 6 miles southeast of Doyleville.

Drainage area .-- 228 sq mi.

Gage .-- Recording. Altitude of gage is 8,200 ft (from railroad elevation).

Stage-discharge relation. -- Defined by current-meter measurements below 400 cfs.

Bankfull stage .-- 6 ft.

Remarks.--Larkspur ditch diverts water above station to Arkansas River basin.

Diversions for irrigation of about 2,400 acres. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 220 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 28, 1945	5.51	336	1948	May 8, 1948 May 22, 1948	5.40 6.66	241 437
1946	Mar. 19, 1946 May 11, 1946	4.72 4.42	- 153	1949	Apr. 24, 1949 May 27, 1949	5.55 6.09	263 359
1947	May 11, 1947 May 28, 1947 June 9, 1947	5.85 5.66 5.71	369 355 373		June 19, 1949 July 7, 1949 July 9, 1949	6.29 5.51 5.36	389 290 270
1948	Apr. 17, 1948 May 1, 1948	5.60 5.30	270 227	1950	June 3, 1950	4.67	189

1170. Tomichi Creek at Parlin, Colo.

Location.--Lat 38°29'55", long 106°43'35", in NW_{π}^{1} sec.23, T.45 N., R.2 E., at Parlin, 300 ft from U.S. Highway 50 and a quarter of a mile upstream from Quartz Creek.

Drainage area .-- 586 sq mi.

Gage .-- Recording. Altitude of gage is 7,920 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 400 cfs.

Bankfull stage. -- 41 ft.

Remarks.--Larkspur ditch diverts water above station to the Arkansas River basin. Diversions for irrigation of about 11,000 acres. Diversions probably affect peak flows substantially. Peak flows are principally from snowmelt. Only annual peaks are shown.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1945	May 16, 1945	5.21	354	1949 1950	June 20, 1949 Apr. 8, 1950	5.66 5.30	423 373			
1946 1947 1948	Apr. 30, 1946 June 13, 1947 May 25, 1948	4.59 5.61 6.37	161 499 669	1951	May 30, 1951	5.67	454			

1180. Quartz Creek near Ohio City, Colo. (Published as "near Ohio" prior to October 1959)

<u>Location</u>.--Lat 38°33'35" long 106°38'10", in $SW_u^1SW_u^1$ sec.27, T.50 N., R.3 E., 10 ft downstream from bridge on State Highway 162, 0.7 mile downstream from Willow Creek, 1.3 miles southwest of Ohio City, and 1.4 miles downstream from Gold Creek.

Drainage area, -- 106 sq mi.

Gage.--Recording. At site 75 ft upstream prior to Sept. 30, 1950. Prior to Oct. 1, 1945, at datum 3.00 ft higher and Oct. 1, 1945, to Sept. 30, 1950, at datum 2.00 ft higher. Altitude of gage is 8,430 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 470 cfs.

Remarks.--Diversions above station for irrigation of about 900 acres. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 220 cfs.

Peak stages and discharges Gage Gage Discharge Discharge Water Water Date Date height height (cfs) (cfs) year year (feet) (feet) 313 2.71 1945 1, 1945 1.83 1938 Мау 30, 1938 Aug. June 6, 1946 2.97 344 1939 May 22, 1939 1.99 291 1946 8, 1947 9, 1947 16, 1940 1.54 149 1947 May 2.95 1940 May June 3.53 502 2.23 1941 May 18, 1941 357 3.53 27, 1941 500 May 2.09 303 1948 May 22, 1948 June 7, 1941 June 19, 1941 June 4, 1948 538 2.00 273 3.61 2.31 370 May 30, 1949 June 19, 1949 2.81 248 1949 11, 1942 26, 1942 1.68 234 3.69 May 1942 May 2.90 640 2.82 1950 June 1, 1950 247 Apr. 30, 1943 1.87 291 1943 Mar. 17, 1960 June 3, 1960 June 2, 1943 June 11, 1943 2.17 542 1960 a3.37 397 3.15 377 1.65 June 1, 1961 2.77 240 1944 June 9. 1944 1.84 345 1961 May 12, 1962 3,19 389 1945 May 28, 1945 1.75 255 1962 June 14, 1962 June 21, 1962 2.93 301 June 15, 1945 July 31, 1945 1.88 306 257 4.73

a Backwater from ice.

1185. Cochetopa Creek near Parlin, Colo.

Location.--Lat 38°24', long 106°46', in NW $\frac{1}{4}$ sec.28, T.48 N., R.2 E., at Timmey Ranch, 1 mile downstream from Bead Creek, 8 miles southwest of Parlin, and 10 miles upstream from mouth.

Drainage area .-- 346 sq mi.

Gage.--Nonrecording prior to Apr. 7, 1942, at site 400 ft downstream at different datum; recording thereafter. Datum of gage is 8,131.76 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 380 cfs.

Bankfull stage .-- 3 ft.

Remarks.--Tarbell ditch, a transmountain diversion above station, exports water to the Rio Grande basin. Diversions for irrigation of about 5,000 acres. Diversions probably affect peak flows substantially. Peak flows are principally from snowmelt. Records for May to December 1940 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Apr. 21,22,24, June 16,21,1940	2.06	29	1944 1945	May 14, 1944 Aug. 8, 1945	5.02 2.44	5 94 166
1941 1942 1943	June 26, 1941 Apr. 15, 1942 Apr. 14, 1943, Aug. 23, 1943	4.20 4.30 2.31	380 448 114	1946 1947 1948	June 7, 1946 July 8, 1947 June 4, 1948	2.21 3.31 3.83	127 317 394

1190. Tomichi Creek at Gunnison, Colo.

Location. --Lat 38°31'20", long 106°56'25", in $NE_{\pm}^{1}SW_{\pm}^{1}$ sec.11, T.49 N., R.1 W., on right bank 300 ft downstream from highway bridge, 1.8 miles south of post office in Gunnison, and 2 miles upstream from mouth.

Drainage area. -- 1,020 sq mi, approximately.

Gage.--Recording. At datum 1.00 ft higher Apr. 20, 1938, to Oct. 2, 1940. Datum of gage is 7,628.58 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1,900 cfs.

Remarks.--Diversions for irrigation of about 24,000 acres. Diversions probably affect peak flows substantially. Peak flows are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1938	June 2, 1938	2.35	950	1951	May 31, 1951	2.83	635
1939	Mar. 24, 1939	2.93	1,530	1952	June 12, 1952	3.87	1.360
1940	Mar. 27, 1940	1.02	326	1953	May 29, 1953	3,30	875
				1954	July 23, 1954	2.34	370
1941	May 16, 1941	3.00	855	1955	Aug. 3, 1955	2.35	328
1942	May 28, 1942	3.97	1,350		,		
1943	May 5, 1943	2,90	745	1956	June 5, 1956	2.80	682
1944	May 17, 1944	3,26	943	1957	June 8, 1957	4.10	1,900
1945	May 15, 1945	2.63	570	1958	May 26, 1958	3.57	1,380
	,			1959	Apr. 7, 1959	2.02	360
1946	June 9, 1946	2.11	310	1960	Mar. 28, 1960	a3.10	-
1947	June 11, 1947	3.09	910		June 7, 1960	2.56	620
1948	May 25, 1948	3.67	1,280		,		
1949	June 20, 1949	3.74	1,320	1961	May 30, 1961	2.10	384
1950	Apr. 8, 1950	2.49	570	1962	May 13, 1962	3.05	920

a Backwater from ice.

1205. Gunnison River at Iola, Colo.

Location.--Lat 38°28'50", long 107°05'30", in NW $\frac{1}{4}$ sec.28, T.45 N., R.2 W., $\frac{1,000}{1,000}$ ft upstream from bridge on State Highway 149 and 3,000 ft northeast of

Drainage area. -- 2,490 sq mi, approximately.

Gage.--Nonrecording Apr. 1, 1900, to Dec. 23, 1903, on highway bridge 1,000 ft downstream at different datum; recording thereafter. Datum of gage is 7,434.63 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below }6,900~\text{cfs}.$

Remarks.--Flow partly regulated by Taylor Park Reservoir since September 1937.

Diversions for irrigation of about 51,000 acres. Diversion and regulation substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	May 30, 1900	5.8	5,560	1942 1943	June 8, 1942 June 3, 1943	4.14 3.41	5,630 4,100
1901 1902 1903	May 20, 1901 May 11, 1902 June 18, 1903	5.7 4.0 6.0	5,400 2,640 6,130	1944 1945	June 1, 1944 June 23, 1945	3.74 2.98	4,830 2,890
1938 1939	June 5, 1938 Dec. 19, 1938 May 31, 1939	4.37 4.90 3.15	5,750 3,340	1946 1947 1948 1949	June 9, 1946 June 21, 1947 May 22, 1948 June 19, 1949	3.60 4.10 5.11 4.89	3,920 5,080 7,140 7,140 2,940
1940 1941	May 17, 1940 May 14, 1941	2.15 3.86	1,650 5,080	1950 1951	June 7, 1950 May 29, 1951	2.85 3.55	4,170

1215. Cebolla Creek near Lake City, Colo.

Location. --Lat 37°58'50", long 107°10'00", in sec.14, T.43 N., R.3 W., on left bank 10 ft downstream from Tumble Creek, a quarter of a mile from State Highway 149, 32 miles upstream from Brush Creek, and 9 miles southeast of Lake City.

Drainage area .-- 25.5 sq mi.

Gage .-- Recording. Altitude of gage 10,200 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 210 cfs.

Remarks.--Tabor ditch diverts water about $4\frac{1}{2}$ miles above station to Clear Creek in Rio Grande basin. Diversion probably does not substantially affect peak flows. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948 1949 1950	May 21, 1948 June 12, 1949 May 21, 1950	2.99 2.03	180 218 79	1952 1953 1954	June 7, 1952 May 26, 1953 May 12, 1954	2.63 2.74 1.92	169 178 53
1951	May 30, 1951	2,44	130				

1220. Cebolla Creek at Powderhorn, Colo.

<u>Location</u>.--Lat 38°17'30", long 107°07'00", in SE_u^1 sec.29, T.47 N., R.2 W., on left bank 200 ft downstream from bridge on State Highway 149, 250 ft downstream from Powderhorn Creek, and half a mile north of Powderhorn.

Drainage area. -- 334 sq mi.

Gage. -- Recording. Altitude of gage is 8,000 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 760 cfs.

Bankfull stage .-- 21 ft.

Remarks.--Diversions for irrigation of about 2,800 acres. Tabor ditch diverts water above station to Rio Grande basin. Diversions probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 29, 1938 June 4, 1938	2.40 2.37	1,060 1,040	1947	May 6, 1947 May 9, 1947	2.60 2.67	1,190 1,260
1939 1940	Apr. 23, 1939 May 12, 1940	1.68	481 229	1948	May 8, 1948 May 22, 1948 June 3, 1948	2.52 3.23 2.70	1,020 1,680 1,030
1941	May 13, 1941	2.47	1,070	1949	June 17, 1949 June 24, 1949	3.40 3.17	980 820
1942 1943	June 7, 1942 May 3, 1943	2.39 1.55	1,110 368	1950	June 3, 1950	2.27	305
1944	May 16, 1944 May 25, 1944	3.00 2.29	2,150 1,320	1951 1952	May 28, 1951 June 8, 1952	2.70 3.1s	465 776
	May 31, 1944 June 10, 1944	2.18 2.13	1,210 1,160	1953	May 28, 1953	2.89	514
1945	May 27, 1945	1.12	458	1954	July 22, 1954	2.32	228
1946	July 18, 1946	2.10	970	1955	June 9, 1955	2.67	405

1225. Soap Creek near Sapinero, Colo.

Location.--Lat 38°33'40", long 107°19'30", in SW_{π}^1 sec.29, T.50 N., R.4 W., on right bank l_{π}^1 miles upstream from Cow Creek and $6\frac{1}{2}$ miles north of Sapinero.

Drainage area. -- 57.3 sq mi.

Gage. -- Recording. Altitude of gage is 7,790 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 800 cfs.

Remarks.--One small diversion above station for irrigation does not materially affect peak flows. Peaks are primarily from snowmelt. Base for partial-duration series, 300 cfs.

Peak stages and discharges of Soap Creek near Sapinero, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 6, 1956 May 21, 1956 June 2, 1956	3.42 3.29 3.33	382 390 410	1959	May 15, 1959 June 7, 1959	3.45 3.27	415 334
1957	May 4, 1957 June 6, 1957 June 28, 1957	3.81 a6.07 4.57	566 bl,000	1960	May 12, 1960 June 4, 1960 May 22, 1961	3.45 2.88 3.05	485 323 295
1958	Apr. 22, 1958 May 7, 1958 May 12, 1958 May 28, 1958 June 7, 1958	4.22 4.07 4.31 4.08	(c) 510 474 611 600	1962	Apr. 20, 1962 Apr. 24, 1962 May 6, 1962 June 13, 1962	3.55 3.34 3.53 2.70	510 436 502 366

a Backwater from debris.

1230. Sapinero Creek at Sapinero, Colo.

Location.--Lat 38°28'30", long 107°18'00", in sec.28, T.49 N., R.4 W., on right bank 50 ft upstream from bridge on U.S. Highway 50, 500 ft upstream from mouth, and five-eighths of a mile northeast of Sapinero.

Drainage area. -- 85.5 sq mi.

Gage.--Nonrecording at site 200 ft upstream at different datum July 22, 1913, to Sept. 30, 1914; recording thereafter. Datum of gage is 7,226.84 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 640 cfs.

Remarks.--Diversions for irrigation of about 400 acres should not affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 300 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height vear (cfs) year (cfs) (feet) (feet) 1914 15, 1914 790 1949 June 18, 1949 June 23, 1949 4.29 510 May 5.4 4.16 487 1946 June 7, 1946 3.71 290 Apr. 22, 1950 May 17, 1950 May 22, 1950 3.85 1950 311 1947 May 5, 1947 June 22, 1947 4.04 3.53 540 3.89 311 302 3.90 315 May 27, 1951 June 18, 1951 Aug. 1, 1951 4.23 3.80 4.39 1948 Apr. 21, 1948 3.97 563 1951 494 Apr. 29, 1945 May 7, 1948 3.85 3.79 568 330 615 576 May 22, 1948 892 4.49 Apr. 28, 1952 May 5, 1952 May 15, 1952 June 8, 1952 4.35 625 1952 Apr. 24, 1949 May 4, 1949 May 16, 1949 1949 4.07 358 4.50 820 4.30 May 4.08 358 645 May 4.15 398 4.74 755 May 27, 1949 4.14 378

b About.
Unknown; probably exceeded base discharge.

1235. Lake Fork at Lake City, Colo.

Location. --Lat 38°01'05", long 107°18'45", in sec.34, T.44 N., R.4 W., 507 ft upstream from Wade Gulch, 2,000 ft upstream from Henson Creek, and half a mile south of Lake City.

Drainage area. -- 123 sq mi (126 sq mi at site below Wade Gulch).

Gage. --Nonrecording Apr. 21, 1918, to Sept. 30, 1924, and June 10, 1929, to Oct. 11, 1931, at site 600 ft downstream and 100 ft downstream from Wade Gulch, at different datums; recording thereafter. Altitude of gage is 8,665 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements below 950 cfs.

Remarks.--Diversions for irrigation of about 300 acres. Natural regulation by Lake San Cristobal, 4 miles upstream. Diversions do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 14, 1918	2.57	980	1929	June 15, 1929	2.32	862
1919	Feb.26,27,28,29, Mar. 2, 1919 June 17, 1919	3.10 2.4	- 780	1932	May 22, 1932 June 26, 1932	2.95 3.15	662 734
1000	1			1933	June 2, 1933	3.27	777
1920	June 10, 1920	2.5	900		June 12, 1933	3.13	762
1921	June 15, 1921	3.00	1,560	1934	May 11, 1934	2.37	465
1922	June 8,11,1922	2.62	1,000	1935	June 15, 1935	3.65	1,120
1923	June 16, 1923	2.5	770	1936	May 26, 1936	2.69	605
1924	June 15, 1924	2.66	1,200	1937	May 18, 1937	3.08	764

1240. Henson Creek at Lake City, Colo.

Location.--Lat 38°01'10", long 107°19'50", in sec.33, T.44 N., R.4 W., 1 mile southwest of Lake City and $1\frac{1}{u}$ miles upstream from mouth.

Drainage area. -- 82 sq mi (83 sq mi at lower site), approximately.

<u>Gage</u>.--Nonrecording prior to Oct. 11, 1931; recording thereafter. At site 1 mile downstream at different datum Apr. 21, 1918, to Sept. 30, 1919. At site 125 ft upstream at different datum Sept. 17, 1928, to Oct. 28, 1929. Altitude of gage is 8,750 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 780 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt.

Only annual peaks are shown.

	Total Postor and application										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1918 1919	June 11, 1918 May 29, 1919	2.78 4.3	1,180 944	1933 1934	June 10, 1933 May 10, 1934	3.93 2.94	1,190 680				
1929	July 25, 1929	4.5	1,720	1935	June 14, 1935	4.15	995				
1932	June 24, 1932	3.94	1,200	1936 1937	May 25, 1936 May 15, 1937	3.17 3.01	786 6 94				

1245. Lake Fork at Gateview, Colo.

Location. --Lat 38°17'50", long 107°13'50", in sec.29, T.47 N., R.3 W., on left bank 15 ft downstream from private bridge, at old village of Gateview, a quarter of a mile upstream from Indian Creek, and 15 miles upstream from mouth.

Drainage area .-- 338 sq mi.

Gage.--Recording. At datum 2.00 ft higher prior to Oct. 1, 1988. At datum 1.00 ft higher Oct. 1, 1938, to Sept. 30, 1945. Datum of gage is 7,827.66 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 2,200 cfs.

Remarks. -- Diversions for irrigation of about 1,600 acres. Diversions do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 1,400 cfs.

		1	Peak stages a	ınd disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	June 4, 1938	4.20	2,120	1949	June 17, 1949	4.23	2,360
	June 21, 1938	4.00	2,620				
1939	M 00 1070	3.01	1	1950	June 17, 1950	2.86	1,180
1939	Mar. 20, 1939 May 22, 1939	2.49	923	1951	June 17, 1951	2.92	1,100
	June 5, 1939	2.72	1,110	1001	, , , , , , , , , , , , , , , , , , , ,		_,
	June 14, 1939	2.71	1,100	1952	June 8, 1952	4.18	2,610
	-	1	1]]	June 16, 1952	3.88	2,280
1940	June 2, 1940	2.91	1,330		June 30, 1952	3.47	1,850
1941	May 14, 1941	3.33	1,780	1953	June 13, 1953	3.54	2,600
	June 24, 1941	3.61	2,500				,
	,		1	1954	July 23, 1954	2.39	856
1942	May 27, 1942	2.65	1,580	1000	7 0 1055	7 70	1 570
	June 8, 1942	3.22 3.21	2,050 2,040	1955	June 9, 1955	3.30	1,530
	June 19, 1942	3.21	2,040	1956	June 3, 1956	3.09	1,340
1943	Aug. 11, 1943	2.47	1,440			1	
	• •		1	1957	June 6, 1957	3.82	1,990
1944	May 16, 1944	2.65	1,680	ii	June 21, 1957	4.03	2,340
	May 31, 1944	2.95	2,000	ll.	June 29, 1957	4.30	2,700
	June 11, 1944	2.84	1,900	1050	W 00 1050	3.67	2,100
	June 25, 1944	3.07	2,100	1958	May 28, 1958 June 7, 1958	3.80	2,440
1945	June 15, 1945	2.47	1.460	}}	June 20, 1958	2.92	1,470
1040	June 24, 1945	2.36	1,370	ll.	0 42.0 20, 2000		
			1	1959	June 8, 1959	3.00	1,330
1946	June 7, 1946	3.71	1,790		1		
			1	1960	June 4, 1960	3.43	1,800
1947	May 9, 1947	3.34	1,560	ĮĮ.	June 20, 1960	3.37	1,740
	June 9, 1947 June 17, 1947	4.00 3.21	2,150 1,440	1961	May 28, 1961	3,10	1,420
	June 20, 1947	3.23	1,460	1301	may 20, 1301	3.10	1,100
	June 30, 1947	3.53	1,730	1962	Dec. 14, 1961	a3.65	-
		1		()	June 14, 1962	3,15	1,460
1948	May 22, 1948	4.00	2,260	li .	June 23, 1962	3.12	1,430
	June 10, 1948	4.06	2,370	H	1	1	

a Backwater from ice.

1250. Curecanti Creek near Sapinero, Colo.

Location. --Lat 38°29'15", long 107°24'55", in sec.21, T.49 N., R.5 W., $2\frac{1}{2}$ miles upstream from mouth and 6 miles west of Sapinero.

Drainage area .-- 31.8 sq mi.

Gage.--Recording. At datum 3.00 ft higher prior to Oct. 1, 1947, and 1.00 ft higher Oct. 1, 1947, to Sept. 17, 1952. Datum of gage is 7,867.43 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 440 cfs.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 250 cfs.

Peak stages and discharges of Curecanti Creek near Sapinero, Colo.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 7, 1946	3.27	248	1954	May 15, 1954	3.26	92
1947	May 3, 1947	3.55	322	1955	May 14, 1955	3.56	160
1948	May 7, 1948 May 22, 1948	5.34 4,44	280 4 22	1956	June 2, 1956	3.78	225
	May 17, 1948	5,62	-	1957	June 5, 1957 June 28, 1957	4.20 4.30	480 420
1949	June 18, 1949 June 23, 1949	3.80 3.58	304 260	1958	May 12, 1958 May 20, 1958	3.70 3.88	273 336
1950	May 17, 1950	3.61	268		May 28, 1958 June 6, 1958	4.03	426 390
1951	May 27, 1951	3.85	263	1959	May 14, 1959	3.55	183
1952	May 5, 1952 May 15, 1952 June 6, 1952	4.28 4.04 4.15	350 319 422	1960	May 13, 1960	3.78	244
1953	May 28, 1953	4.10	312	1961	May 28, 1961	3,32	163
	June 12, 1953	4.12	305	1962	May 9, 1962	3.90	274

1260. Cimarron Creek near Cimarron, Colo.

Location.--Lat 38°15'30", long 107°32'40", in sec.8, T.46 N., R.6 W., on right bank 0.2 mile downstream from highway bridge, 0.5 mile upstream from headgate on Cimarron ditch, 2.5 miles downstream from West Fork, and 13 miles south of Cimarron.

Drainage area. -- 66.8 sq mi.

Gage .-- Recording. Altitude of gage is 8,650 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{1,700\ cfs}. -- Defined\ by\ current-meter\ measurements\ below$

Remarks.--Diversion above station through Owl Creek ditch into Uncompandere
River basin does not materially affect peak flows. Peaks are primarily from
snowmelt. Base for partial-duration series, 400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1955	June 8, 1955	6.74 8.03	810	1959	June 9, 1959	6.00	655
	Aug. 4, 1955	0.03	1,590	1960	June 3, 1960	6.33	781
1956	May 31, 1956	6.61	700		June 17, 1960	6.15	655
				1961	May 31, 1961	6.07	705
1957	June 14, 1957	6.65	768	1	June 8, 1961	5.84	602
	June 28, 1957	8.32	1,790	1962	May 12, 1962 May 27, 1962	6.03 5.46	662 4 50
1958	May 27, 1958	7.15	1,030	-	May 27, 1962 June 5, 1962	5.49	466
	June 6, 1958 June 20, 1958	7.54 6.15	1,260 722		June 13, 1962 June 19, 1962	6.15 6.10	700 710

1270. Cimarron Creek below Squaw Creek, at Cimarron, Colo.

Location. -- Lat 38°27'00", long 107°33'30", in sec. 5, T.48 N., R.6 W., on left bank 150 ft upstream from bridge, 850 ft downstream from Squaw Creek, a quarter of a mile northeast of Cimarron, and three-quarters of a mile upstream from mouth.

Drainage area. -- 232 sq mi.

<u>Gage</u>.--Nonrecording prior to Oct. 21, 1943, on bridge 150 ft downstream at different datum; recording thereafter. Datum of gage is 6,864.10 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below 1,330 cfs.

Remarks.--Natural flow of stream affected by Cimarron and Owl Creek ditches (28,460 acre-ft diverted during water year 1951-52) for irrigation of about 5,000 acres in Uncompangre River drainage; imported water from Blue River drainage; diversions for irrigation of about 3,000 acres; and return flow from irrigated areas. Diversions substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 2, 1943	6.10	1,100	1948	May 21, 1948	7.00	1,660
1944	May 16, 1944	6.17	1,290	1949	June 19, 1949	7.40	1,700
1945	June 14, 1945	5.89	1,100	1950	June 16, 1950	5.33	764
1946	June 11, 1946	5.75	1,040	1951	June 17, 1951	5.32	764
1947	June 8, 1947	6.10	1,240	1952	June 11, 1952	7.68	1,840

1275. Crystal Creek near Maher, Colo.

<u>Location</u>.--Lat 38°33'05", long 107°30'20", in $SE_{\overline{u}}^1$ sec.35, T.50 N., R.6 W., on right bank 640 ft downstream from private bridge, half a mile upstream from diversion to Iron Creek basin, 0.7 mile downstream from Dyer Creek, 7 miles upstream from mouth, and 7 miles southeast of Maher.

Drainage area. -- 39.1 sq mi.

Gage.--Nonrecording prior to Sept. 30, 1919, at bridge a quarter of a mile downstream at different datum; recording thereafter. At site 140 ft upstream at datum 1.45 ft higher July 6, 1945, to Sept. 30, 1954. Altitude of gage is 8,070 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 300 cfs.

Remarks.--Diversions for irrigation of a few acres of hay meadows do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 160 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year		Date	Gage height (feet)	Discharge (cfs)
1917	June 13, 1917	3.2	419	1948	May May	7, 1948 21, 1948	4.34	365 472
1918	May 5,6,7,18.	1.9	179	il	1	,	ľ	
	1918	}	}	1949	Apr. May	28, 1949 4, 1949	4.01 3.68	288 212
1919	Apr. 22, 1919	2.6	320	!!		14, 1949	3.52	182
				1)		26, 1949	3.54	194
1946	Apr. 25, 1946	3,44	194	H		17, 1949	3.79	248
	May 5, 1946 June 7, 1946	3.28 3.34	162 17 4	1	June	23, 1949	3.93	279
	ĺ	i	1	1950	Apr.	21, 1950	3.58	186
1947	May 3, 1947 May 22, 1947	4.50 3.41	416 178		June	1, 1950	3.57	184
	June 21, 1947	3.33	163	1951	May	27, 1951	3.96	270
1948	Apr. 2, 1948 Apr. 29, 1948	4.58 5.05	437 542	1952	Apr. May	27, 1952 5, 1952	4.53 4.61	410 420

Peak stages and discharges of Crystal Creek near Maher, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 14, 1952 June 7, 1952	4.13	311	1954	May 6, 1954	2.78	61
1953	May 17, 1953	4.24 3.94	352 279	1961	May 19, 1961	2.59	187
	May 28, 1953 June 13, 1953	4.60 3.85	436 270	1962	Apr. 20, 1962 May 9, 1962	3.36 3.03	388 305

1280. Gunnison River below Gunnison tunnel, Colo.

Location.--Lat 38°32', long 107°39', in NW_{\perp}^{\dagger} sec.10, T.49 N., R.7 W., on left bank a quarter of a mile downstream from Gunnison tunnel, 5 miles downstream from Crystal Creek, and 12 miles northeast of Montrose.

Drainage area. -- 3,980 sq mi, approximately.

Gage.--Nonrecording prior to Jan. 20, 1943; recording thereafter. At site 300 ft upstream from diversion dam at east portal of Gunnison tunnel at different datum Apr. 9, 1905, to Aug. 20, 1915. At site 500 ft downstream from diversion dam at east portal of Gunnison tunnel at different datum Aug. 21, 1915, to Jan. 19, 1943. At present site at datum 1.0 ft higher Jan. 20, 1943, to Sept. 30, 1956. Datum of gage is 6,526.06 ft above mean sea level, datum of 1929.

Stage-discharge relation. --Defined by current-meter measurements below 14,000 cfs.

Remarks.--Natural flow of stream affected by transbasin diversions, Taylor Park Reservoir, and diversions for irrigation of about 63,000 acres. Diversions and regulation could substantially affect peak flows. Records for 1912-31 furnished by Bureau of Reclamation and those for 1932-42 by Uncompandere Valley Water Users' Association. Only annual peaks are shown.

reak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1906	June 13, 1906	14.3	14,700	1935	June 15, 1935	13.9	12,100		
1907	June 17, 1907	13.55	12,700		l				
1908	June 11,17,1908	11.1	6,830	1936	May 6, 1936	12.4	9,760		
1909 1910	June 8, 1909	15.7	13,000	1937	May 16, 1937	12.2	9,430		
1910	May 31, 1910	13.0	10,100	1938 1939	June 4,5, 1938	13.3 8.71	11,200		
1911	June 9, 1911	13.7	11,400	1939	June 5, 1939 June 2, 1940	8.0	4,720 4,000		
1912	June 5, 1912	15.9	12,900	1340	June 2, 1940	8,0	4,000		
1913	May 27, 1913	12.5	6,770	1941	May 14, 1941	12.4	9,760		
1914	June 2, 1914	16.0	12,600	1942	June 8, 1942	12.5	9,920		
1915	June 12, 1915	12.65	7,000	1943	June 2, 1943	8.60	7,850		
1010	- Curic 12, 1515		1,000	1944	May 17, 1944	10.85	11,300		
1916	May 10, 1916	13.2	10,800	1945	June 15, 1945	7.36	5,700		
1917	June 18, 1917	15,2	15,600	1010	J Cana 20, 2010		0,.00		
1918	June 14, 1918	14.65	15,000	1946	June 7, 1946	7.81	6.740		
1919	May 30, 1919	11.6	8,520	1947	June 10, 1947	9.03	8,690		
1920	June 1, 1920	15.35	15,000	1948	May 22, 1948	12.0	12,800		
İ				1949	June 19, 1949	11.72	12,400		
1921	June 15, 1921	14.8	19,000	1950	June 13, 1950	6,68	5,360		
1922	May 30, 1922	12.7	9,940		l		1		
1923	May 28, 1923	12.6	9,800	1951	May 29, 1951	7.62	6,450		
1924	June 14, 1924	13.15	11,000	1952	June 9, 1952	12.40	14,000		
1925	June 22, 1925	9.90	6,160	1953	June 14, 1953	10.05	9,640		
1926	Turn 2 1000	30.55	0.000	1954 1955	May 22, 1954	3.63	1,860		
1927	June 7, 1926 May 19, 1927	12.55 12.55	9,860 10,000	1955	June 9, 1955	6.08	4,250		
1928	May 31, 1928	15.3	14,800	1956	June 3, 1956	7.70	6,350		
1929	May 26, 1929	13.85	12,200	1957	June 30, 1957	14.75	16,800		
1930	June 13, 1930	11.2	7,920	1958	May 28, 1958	12.90	12,800		
			.,520	1959	June 15, 1959	7.80	5,160		
1931	June 1, 1931	6.60	2,690	1960	June 20, 1960	8.49	5,960		
1932	May 19, 1932	11.3	8,070	/ -			, ,,,,,		
1933	June 2, 1933	13.1	10,900	1961	May 29, 1961	7,00	4,280		
1934	May 11, 1934	7.0	3,020	1962	May 13, 1962	10.96	10,000		

1285, Smith Fork near Crawford, Colo.

<u>Location</u>.--Lat 38°44', long 107°31', in sec.24, T.15 S., R.91 W., 20 ft upstream from county bridge, 0.4 m1 upstream from Second Creek, 6 miles northeast of Crawford, and $6\frac{1}{2}$ miles upstream from Iron Creek.

Drainage area. -- 42 sq mi, approximately.

 $\frac{\text{Gage.--Nonrecording prior}}{\text{gage 1s 7,200 ft (by barometer)}}$. Altitude of

Stage-discharge relation. -- Defined by current-meter measurements below 820 cfs.

Remarks.--Diversions for irrigation of about 800 acres probably $d\underline{o}$ not substantially affect flood peaks. Peak flows are principally from snowmelt. Base for partial-duration series, 260 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	May 5, 1936	3.3	385	1950	May 23, 1950	4.12	233
1937	May 16, 1937	3.1	339	1951	May 28, 1951	4.22	238
1938	May 16, 1938	3.56	408	1952	Apr. 27, 1952 May 5, 1952	4.64 5.09	420 616
1939	May 2, 1939 May 5, 1939 May 10, 1939	2.92 2.80 2.66	376 322 271	-	May 15, 1952 June 7, 1952	4.67 4.52	428 354
1940	May 13, 1940	3.27	469	1953	May 29, 1953 June 2, 1953	4.47 4.08	468 323
1941	May 13, 1941 May 27, 1941	3.80 2.28	513 269	1954	May 10, 1954	3.27	9 8
1942	May 10, 1942 May 22, 1942	3.27 3.55	418 489	1955	May 8, 1955 May 15, 1955	3.80	214
1943	May 5, 1943	3.33	354	1956	May 8, 1956	4.11	313
1944	May 16, 1944	3.67	507 394	1957	May 9, 1957 June 6, 1957	4.42 - 5.56	60 4 al,050
	May 24, 1944	3.20	1		June 8, 1957		
1945	May 14, 1945 May 27, 1945	3.98 3.41	472 358	1958	Apr. 20, 1958 May 7, 1958 May 24, 1958	4.69	334 5500 546
1946	Apr. 23, 1946	2.90	256		June 5, 1958	4.30	267
1947	May 6, 1947 June 22, 1947	3.50 3.04	324 264	1959	May 14, 1959	4.27	232
1948	Apr. 21, 1948	3.48	310	1960	May 12, 1960	4.47	281
	Apr. 30, 1948 May 7, 1948	3.87 4.00	384 410	1961	May 23, 1961	4.27	209
	May 19, 1948	5.02	604	1962	Apr. 19, 1962 May 6, 1962	4.86 4.83	450 465
1949	May 27, 1949	4.33	256		May 12, 1962	4.64	378

a Annual maximum.

1290. Smith Fork at Crawford, Colo.

<u>Location</u>.--Lat 38°43', long 107°35', in $SE_{\overline{u}}^{1}$ sec.29, T.15 S., R.91 W., on right bank 100 ft upstream from former bridge site, $l_{\overline{z}}^{2}$ miles northeast of Crawford, and 2 miles upstream from Iron Creek.

Drainage area. -- 63 sq mi, approximately.

Gage . -- Recording .

Stage-discharge relation .-- Defined by current-meter measurements below 590 cfs.

Remarks.--Diversions above station for irrigation above and below station,

I diversion to Cottonwood Creek drainage, 1 small diversion to Iron Creek
drainage, and water imported from Curecanti Creek drainage materially affect
peak flows. Only annual peaks are shown.

b About.

Peak stages and discharges of Smith Fork at Crawford, Colo.

					,	0010.	
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 8, 1955	2.51	199	1958	May 24, 1958	2,70	575
1956 1957	May 7, 1956 June 5, 1957	2.62	292 1,200	1959 1960	May 14, 1959 May 13, 1960	2.01 2.55	210 376

1295. Iron Creek near Crawford, Colo.

<u>Location</u>.-Lat 38°41', long 107°36', in $SW_{\overline{u}}^{\frac{1}{4}}$ sec.13, T.51 N., R.7 W., on right bank a quarter of a mile downstream from Clear Fork and 1.8 miles southeast of Crawford.

Drainage area. -- 67 sq mi, approximately.

Gage.--Recording. Datum of gage is 6,443.73 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation. -- Defined by current-meter measurements below 100 cfs and at gage height 5.70 ft.

Remarks.--Natural flow of stream affected by diversions from Crystal Creek, storage in Gould Reservoir (capacity, 6,420 acre-ft), diversions for irrigation, and return flow from irrigated areas. Diversion and regulation could substantially affect peak flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Tischarge (cfs)
1948 1949 1950	Oct. 14, 1947 July 25, 1949 July 11, 1950	6.05 4.86 4.30	367 242 183	1951 1952	Aug. 20, 1951 Aug. 20, 1952	4.62 5.20	218 282

1305. East Muddy Creek near Bardine, Colo.

Location. --Lat 39°01', long 107°22', in sec.17, T.12 S., R.89 W., on left bank 5 ft from State Highway 133, a quarter of a mile downstream from Spring Creek, $1\frac{1}{2}$ miles upstream from West Muddy Creek, and $6\frac{1}{2}$ miles upstream from Bardine.

Drainage area. -- 136 sq mi.

Gage.--Recording. Datum of gage is 6,654.78 ft above mean sea level, datum of 1929. At datum 0.50 ft higher prior to Oct. 1, 1936.

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Bankfull stage .-- 5 ft.

Remarks.--Diversions for irrigation of about 2,000 acres above station do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 650 cfs.

]	Peak stages a	nd disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 25, 1935	1.92	613	1941	May 13, 1941	3.41	2,190
1936	May 5, 1936	2.12	824	1942	May 23, 1942	2.34	1,130
1937	May 15, 1937	2.49	744	1943	Apr. 30, 1943	1.77	646
1938	Apr. 30, 1938 May 15, 1938 May 28, 1938	2.88 2.80 2.84	1,330 1,250 1,290	1944	May 16, 1944 May 23, 1944 June 10, 1944	2.78 2.66 1.74	1,440 1,480 732
1939	May 5, 1939	2.13	624	1945	May 12, 1945 May 17, 1945	2.40	1,160 956
1940	May 9, 1940	2.25	720		May 26, 1945	2.03	844

Water

vear

1946

1947

1948

1949

Gage Gage Water Discharge Discharge height (feet) Date Date height (feet) (cfs) (cfs) year May 16 or 17 1950 1.70 680 Apr. 28, 1946 1.69 662 1950 5, 1947 2.57 1,460 May 1951 May 26, 1951 1.40 480 Apr. 21, 1948 1.66 728 1,200 Apr. 30, 1948 May 7, 1948 May 19, 1948 2.14 1,100 1952 Apr. 27, 1952 2.32

1953

May

May

5, 1952 15, 1952

May 27, 1953

2.80

2.28

1,500 1,070

806

Peak stages and discharges of East Muddy Creek near Bardine, Colo. -- Continued

1306. West Muddy Creek near Ragged Mountain, Colo.

<u>Location</u>.--Lat 39°08', long 107°35', in NW $\frac{1}{4}$ sec.5, T.11 S., R.91 W., on left bank 100 ft upstream from Gold Creek and $9\frac{1}{2}$ miles northwest of Ragged Mountain.

1,130 1,380

740

684

2.57

1.80

1.72

Drainage area. -- 6.88 sq mi.

3, 1949 5, 1949

Gage . -- Recording.

May

May May 15,

Stage-discharge relation. -- Defined by current-meter measurements below 100 cfs.

Remarks.--No diversions above station. Peaks are principally from snowmelt. Base for partial-duration series, 40 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Apr. 25, 1956	4.24	58	1959	Apr. 7, 1959 May 7, 1959	b4.49 3.71	- 43
1957	May 30, 1957 June 15, 1957	5.27 4.51	170 81	1960	May 9, 1960	3.72	46
	June 20, 1957	4.08	51	1961	Apr. 20, 1961 May 3, 1961	b5.16 3.85	- 54
1958	Apr. 22, 1958 May 7, 1958	- -	(a) 130		May 10, 1961	4.33	88
	May 12, 1958 June 5, 1958	- 3.99	(a) 50	1962	Apr. 28, 1962 May 10, 1962	4.27 5.80	87 260

a Unknown; probably exceeded base discharge.

1315. Muddy Creek at Bardine, Colo.

<u>Location</u>.--Lat 38°56'25", long 107°21'30", in NE $\frac{1}{4}$ sec.8, T.13 S., R.89 W., on right bank 30 ft downstream from bridge on State Highway 135 at Bardine, a quarter of a mile upstream from confluence with Anthracite Creek, $l_2^{\frac{1}{2}}$ miles downstream from Deep Creek, and $5\frac{1}{2}$ miles east of Somerset.

Drainage area. -- 246 sq mi.

Gage .-- Recording. Datum of gage is 6,266.07 ft above mean sea level, datum of Ī929.

Stage-discharge relation. -- Defined by current-meter measurements below 2.800 cfs.

Remarks.--Small diversions to nearby drainage basins for irrigation of about 2,500 acres above station, and storage in Overland Reservoir (capacity, 2,660 acre-ft). Diversions and storage do not materially affect peak flows. Base for partial-duration series, 1,100 cfs.

b Backwater from ice.

Peak stages and discharges of Muddy Creek at Bardine, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 16, 1950	4.34	1,110	1953	May 27, 1953	4.25	1,080
1951	May 8, 1951	3.79	714	1954	Apr. 21, 1954	3.14	3 82
1952	Apr. 27, 1952 May 4, 1952 May 13, 1952	5.23 5.80 5.13	2,300 3,400 2,130	1955	May 8, 1955	4.48	1,220

1320. Anthracite Creek near Floresta, Colo.

Location. --Lat 38°51'45", long 107°09'40", in sec.6, T.14 S., R.87 W., at Horse Ranch, 1 mile downstream from Bracken Creek, 2 miles northwest of Old Floresta, and 9 miles west of Crested Butte.

Drainage area. -- 17.5 sq mi.

<u>Gage.</u>--Recording. At different datum October 1938 to September 1943. Altitude of gage is 8,830 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 580 cfs.

Remarks.--One small diversion above station to Coal Creek. Diversion does not substantially affect peak flows. Peak flows are principally from snowmelt. Records for 1939-40 furnished by Bureau of Reclamation. Base for partial-duration series, 370 cfs.

Peak stages and discharges

	reak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)			
1939	May 30, 1939	3.8	370	1956	May 20, 1956 June 2, 1956	3.94 4.46	354 512			
1940	May 31, 1940	4.16	361	1957	Apr. 14, 1957	a6.16	_			
1941	May 17, 1941 May 26, 1941 June 18, 1941	4.20 4.15 4.46	412 398 488		June 7, 1957 June 20, 1957 June 28, 1957 July 18, 1957	5.17 5.07 5.17 4.13	684 554 709 375			
1942	May 26, 1942 June 11, 1942	4.62 4.45	527 461	1958	Apr. 17, 1958 May 27, 1958	a5.48 4.66	489			
1943	June 2, 1943	4.41	491		June 6, 1958	5.17	673			
1955	June 8, 1955	4.04	402	ll .						

a Backwater from ice.

1325. North Fork Gunnison River near Somerset, Colo.

Location.--Lat 38°55'45", long 107°26'55", in sec.9, T.13 S., R.90 W., on right bank l_{\perp}^1 miles east of Somerset and 4 miles upstream from Hubbard Creek.

Drainage area . -- 521 sq mi.

<u>Gage</u>.--Recording. Datum of gage is 6,038.6 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 5,900 cfs.

Bankfull stage .-- 6 ft.

Remarks. -- Diversions for irrigation of about 3,000 acres, small diversions for irrigation to nearby drainage basins, and storage in Overland Reservoir (capacity, 2,660 acre-ft). Diversions and storage probably do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 2,400 cfs.

Peak stages and discharges of North Fork Gunnison River near Somerset, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	May 12, 1934	3.00	1,400	1948	May 7, 1948 May 20, 1948	4.77 5.01	3,860 4,450
1935	May 13, 1935 May 27, 1935 June 13, 1935	3.85 4.64 4.67	2,090 3,080 3,120	1949	Apr. 28, 1949 May 3, 1949 May 15, 1949	3.62 4.05 3.98	2,470 3,070 2,880
1936	Apr. 27, 1936 May 6, 1936 May 17, 1936	4.38 5.15 4.58	2,680 3,780 3,010		May 30, 1949 June 18, 1949	3.70 3.93	2,450 2,780
1937	May 15, 1937 May 29, 1937	5.29 4.22	4,720 2,560	1950	Apr. 22, 1950 May 21, 1950 June 1, 1950	3.90 4.28 3.98	2,670 3,240 2,800
1938	Apr. 25, 1938 Apr. 30, 1938	5.36 5.58	4,870 5,360	1951	May 27, 1951	4.26	3,210
	May 16, 1938 May 28, 1938	5.62 5.28	5,360 4,590	1952	Apr. 27, 1952 May 4, 1952 June 7, 1952	5.05 5.90 4.34	4,120 5,320 3,480
1939	May 5, 1939	4.17	2,690	1953	May 28, 1953	4.56	3,660
1940	May 12, 1940	4.24	2,790		June 13, 1953	3.91	2,690
1941	May 13, 1941	6.30	5,850	1954	May 20, 1954	2.61	1,150
1942	Apr. 18, 1942 Apr. 23, 1942 May 12, 1942	4.17 4.48 5.05	2,510 2,980 4,010	1955	May 8, 1955 May 14, 1955	3.82 3.84	2,670 2,700
	May 27, 1942	5.48	4,620	1956	May 6, 1956 May 21, 1956	4.02 3.73	2,940 2,500
1943	May 1, 1943 June 2, 1943	4.55 4.40	3,060 2,850	1957	May 9, 1957 June 4, 1957	4.70 6.14	4,070 7,860
1944	May 16, 1944 May 23, 1944 June 10, 1944	5.68 5.10 4.14	5,830 4,790 3,070	1958	June 21, 1957 May 7, 1958	4.62 4.55	4,260 3,840
1945	May 13, 1945 May 27, 1945	4.82 4.35	3,770 3,090	l L	May 12, 1958 May 23, 1958 June 6, 1958	4.48 4.48 4.54	3,710 3,710 3,920
1946	Apr. 25, 1946	3.85	2,330	1959	May 15, 1959	3.60	2,390
1947	May 7, 1947	4.72	3,830	1960	May 13, 1960	4.23	3,370
1948	Apr. 21, 1948 Apr. 29, 1948	4.08 4.72	2,810 3,770	1961 1962	May 23, 1961 May 13, 1962	3.58 4.95	2,320 4,880

1330. North Fork Gunnison River near Paonia, Colc.

<u>Location</u>.--Lat 38°53', long 107°34', in NW $\frac{1}{u}$ sec.28, T.13 S., R.91 W., 200 ft downstream from highway bridge, three-quarters of a mile downstream from Terror Creek, 2 miles northeast of Paonia, and 2 miles upstream from Minnesota Creek.

Drainage area .-- 702 sq mi.

<u>Gage</u>.--Nonrecording prior to Sept. 5, 1926, at site 200 ft upstream; recording thereafter. Altitude of gage is 5,750 ft.

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below $4\,,\!300$ cfs.

Remarks.--Fire Mountain Canal diverts water above station for irrigation of about 5,000 acres. Many other smaller diversions for irrigation above station. Peak flows are principally from snowmelt. Records furnished by State engineer of Colorado. Base for partial-duration series, 3,300 cfs.

Peak stages and discharges of North Fork Gunnison River near Paonia, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 6, 1922	6.9	5,130	1928	May 9, 1928 May 26, 1928	4.90 4.12	5,450 3,930
1923 1924	May 27, 1923 May 13,14,17, 1924	6.4 5.4	4,480 3,040	1929	Apr. 18, 1929 May 9, 1929 May 15, 1929	4.15 5.08 5.50	4,310 6,390 7,310
1925	Apr. 17, 1925	4.8	2,210	1930	May 29, 1930	3.42	3,270
1926	May 6, 1926	5.8	3,690	1932	Apr. 16, 1932	3.30	3,400
1927	May 18, 1927	6.3	4,600		May 4, 1932 May 12, 1932 May 21, 1932	3.57 5.04 4.55	4,120 8,590 6,880
1928	May 3, 1928	5,38	6,450		May 21, 1932	4,55	0,000

1340. Minnesota Creek near Paonia, Colo.

<u>Location</u>.--Lat 38°52', long 107°30', in sec.1, T.14 S., R.91 W., a quarter of a mile downstream from South Fork, $4\frac{1}{2}$ miles east of Paonia, and 6 miles upstream from mouth.

Drainage area .-- 41.3 sq mi.

Gage.--Nonrecording prior to Apr. 1, 1942; recording thereafter. At site 100 ft downstream at different datum prior to June 1, 1941. Altitude of gage is 6,200 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks. --One small storage reservoir, one small diversion from Coal Creek basin to Minnesota Creek basin, and several small diversions for irrigation of about 100 acres above station. Diversions and regulation substantially affect peak flows. Peak flows are principally from snowmelt. Records for 1936-41 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 10, 1936	3.0	356	1943 1944	May 6, 1943 May 24, 1944	2.61	119 199
1938 1939	May 15, 1938 May 11, 1939	2.1 2.42	226 11 4	1945	May 13, 1945	2.66	207
1940	May 12, 1940 May 22, 1942	2.90 3.70	176 270	1946 1947	Apr. 28, 1946 May 11, 1947	1.99 2.33	99 147

1345. Leroux Creek near Cedaredge, Colo.

Location. --Lat 38°55'35", long 107°47'35", in NW_{π}^1 sec.16, T.13 S., R.93 W., on right bank 200 ft upstream from headgate of Overland ditch, 400 ft upstream from Cow Creek, and 7 miles northeast of Cedaredge.

<u>Drainage area</u>. -- 43 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 7,160 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 650 cfs.

<u>Remarks.</u> --One small diversion and several small reservoirs above station for irrigation below station. Diversion and regulation do not substantially affect peak flows. Peak flows are principally from snowmelt. Base fcr partial-duration series, 600 cfs. Peak stages and discharges of Leroux Creek near Cedaredge, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 10, 1937	5.10	632	1947	May 8, 1947	4.60	1,110
1938	Apr. 30, 1938 May 13, 1938 May 28, 1938	4.35 4.73 5.01	49 2 962 1,120	1948 1949	May 15, 1948 May 19, 1948 May 29, 1949	4.28 4.22 3.84	820 790
1939 1940	May 10, 1939	4.00 4.48	599 825	1950	May 23, 1950 May 31, 1950	3.84 3.89	600 600 625
1941	May 13, 1941 May 26, 1941	5.02 4.45	1,240 956	1951 1952	May 27, 1951	4.17	765
1942	June. 7, 1941 May 26, 1942	4.30	800 1,310	1952	May 14, 1952 May 26, 1952 June 4, 1952	4.28 4.12 4.33	790 710 815
1943	May 2, 1943	4.02	808	1953	May 31, 1953	3.79	498
1944	May 16, 1944 May 23, 1944	4.20 4.25	760 785	1954 1955	May 9, 1954 May 20, 1955	3.45 3.81	4 12 512
	May 31, 1944 June 9, 1944	4.40 4.27	860 795	1956	May 7, 1956	3.72	553
1945	May 27, 1945	4.25	785	1961	May 22, 1961	3.30	404
1946	May 5, 1946	2.98	245	1962	May 9, 1962	3.77	628

1350. Leroux Creek near Lazear, Colo.

<u>Location</u>.--Lat 38°52', long 107°47', in sec.33, T.13 S., R.93 W., at highway bridge $1\frac{1}{2}$ miles downstream from Dever Creek, $3\frac{1}{2}$ miles upstream from Fire Mountain Canal, and 7 miles north of Lazear.

Drainage area. -- 52 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 12, 1917; recording thereafter. At datum 0.85 ft higher prior to July 20, 1917. Altitude of gage is 6,580 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 810 cfs.

Remarks. -- Natural flow of stream affected by storage reservoirs, diversions above station for irrigation of land above and below station, and by water imported from and exported to nearby streams. Diversions and regulation do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 410 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 17, 1917	3.1	1,420	1922	May 27, 1922	3.8	1,360
1918	May 16, 1918	3.5	840	1923	May 9, 1923 May 20, 1923	2.52	580 676
1919	May 19, 1919	2.9	552		May 26, 1923	3.10	910
1921	May 5, 1921 May 16, 1921	2.82 3.58	733 1,160 1,420	1924	May 13, 1924 June 2, 1924	2.80 2.13	770 4 77
	May 29, 1921 June 7, 1921	4.00 3.47	1,100	1925	May 3, 1925	2.55	406
1922	May 6, 1922	3.40	799	1926	May 21, 1926	2.78	401

1355. Leroux Creek near Hotchkiss, Colo.

<u>Location</u>.--Lat 38 49¹, long 107°46¹, in sec.22, T.14 S., R.93 W., 400 ft downstream from headgate of Peterson, Carr, and Barrow ditch, $3\frac{1}{2}$ miles upstream from mouth, and $3\frac{1}{2}$ miles northwest of Hotchkiss.

Drainage area. -- 64 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 5,950 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 270 cfs.

Remarks. -- Natural flow of stream affected by storage reservoirs for irrigation, diversions for irrigation above station, and water imported from and exported to nearby streams. Diversions and regulation substantially affect peak flows. Peak flows are principally from snowmelt. Records for 1939-41 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939 1940	May 9, 1939 June 1, 1940	2.78 4.38	106 39 7	1942 1943	May 26, 1942 Apr. 30, 1943	5.06 3.74	534 336
1941	May 13, 1941	6.10	638				

1365. Currant Creek near Cedaredge, Colo.

<u>Location</u>.~-Lat $38\,^\circ51$ ', long $107\,^\circ53$ ', in sec.10, T.14 S., R.94 W., on right bank 4 miles southeast of Cedaredge and 6 miles upstream from mouth.

Drainage area. -- 36 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 5,700 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 250 cfs.

Remarks. -- Many diversions for irrigation above station. Some water is diverted above station into nearby streams and some is received by diversion from the same streams. Diversions substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

	11011 11000 0110 01101 010										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)				
1948 1949 1950	May 20, 1948 Apr. 24, 1949 Apr. 22, 1950	2.55 3.58 3.25	34 162 100	1952 1953 1954	May 4, 1952 May 19, 1953 Dec. 16, 1953 Apr. 20, 1954	5.30 2.70 a3.13	320 41 - 18				
1951	May 7, 1951	3.03	77								

a Backwater from ice.

1380. Tongue Creek near Cedaredge, Colo.

<u>Location</u>.--Lat 38°55', long 107°59', in $SE_{\overline{\nu}}^1$ sec.15, T.13 S., R.95 W., half a mile downstream from Sara Creek and 4 miles northwest of Cedaredge.

Drainage area .-- 11.2 sq mi.

Gage.--Nonrecording. At different datum prior to Mar. 3, 1945. Altitude of gage is 5,980 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 62 cfs.

Remarks.--Natural flow of stream affected by storage reservoirs, diversions for irrigation of land above and below station, return flow from irrigated areas and diversions above station for municipal water supply of town of Delta. Diversions and regulation substantially affect peak flows. Records for 1939-41 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges of Tongue Creek near Cedaredge, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942 1943	Apr. 14, 1942 July 31, 1943	9.2 8.10	358 248	1945	July 21, 1945	6.40	295
1944	May 10, 1944	7.32	186	1946	Apr. 18, 1946	4.20	9.5

1395. Ward Creek near Cedaredge, Colo.

<u>Location</u>.--Lat 38°55', <u>long</u> 107°59', in NE_{u}^{1} sec.14, T.13 S., R.95 W., 200 ft downstream from headgate of Sandstone ditch, $1\frac{3}{4}$ miles upstream from Kiser Creek, and $3\frac{1}{2}$ miles northwest of Cedaredge.

Drainage area. -- 19 sq mi, approximately.

Gage. --Nonrecording. At site 150 ft upstream Mar. 4, 1939, to June 30, 1941, at an unknown datum prior to May 19, 1941, and at a different datum thereafter. Altitude of gage is 6,250 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 80 cfs.

Bankfull stage .-- 4 ft.

Remarks. -- Natural flow of stream affected by diversions to nearly streams, storage reservoirs for irrigation, and diversions above station for irrigation of land both above and below station. Records for 1939-40 firnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939 1940	Apr. 4, 1939 May 14, 1940	2.02 2.02	26 39	1943 1944 1945	Apr. 6, 1943 May 16, 1944 Apr. 22, 1945	0.96 1.60 1.56	13 80 70
1941 1942	May 9,10,1941 Apr. 12, 1942	3,00 2,10	117 90	1946	Apr. 21, 1946	.78	7.8

1405. Kiser Creek near Cedaredge, Colo.

<u>Location</u>.-Lat 38°56', long 107°57', in SE $\frac{1}{4}$ sec.12, T.13 S., R.95 W., 400 ft upstream from Cottonwood Creek and 3 miles northwest of Cedaredge.

Drainage area. -- 12.9 sq mi.

Gage .-- Nonrecording. Altitude of gage is 6,250 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 37 cfs.

Remarks. -- Natural flow of stream affected by storage reservoirs, diversions exporting water to and importing water from nearby streams, diversions for irrigation, and return flow from irrigated areas. Diversions and storage substantially affect peak flows. Peak flows are principally from snowmelt. Records for 1939-41 furnished by Bureau of Reclamation. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1940	May 11, 1940	5.02	15	1944 1945	June 16, 1944 May 3, 1945	6.44 5.94	51 30				
1941 1942 1943	May 12, 1941 Apr. 14, 1942 Aug. 6, 1943	5.90 5.36 4.70	60 31 7.0	1946	July 19, 1946	5.60	11				

1410. Cottonwood Creek near Cedaredge, Colo.

<u>Location</u>.-Lat 38°56', long 107°57', in SE $\frac{1}{4}$ sec.12, T.13 S., R.95 W., 400 ft upstream from mouth and 3 miles northwest of Cedaredge.

Drainage area. -- About 5 sq mi.

Gage .-- Nonrecording. Altitude of gage is 6,250 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 65 cfs.

Bankfull stage .-- 6 ft.

Remarks.--Natural flow of stream affected by storage reservoirs, diversions exporting water to and importing water from nearby streams, diversions for irrigation, and return flow from irrigated areas. Diversions and regulation substantially affect peak flows. Records for 1939-41 furnished by Bureau of Reclamation. Only annual peaks are shown.

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1941	May 4, 1941	6.72	84	1945	Feb. 3, 1945	5.42	32				
1942 1943 1944	May 26, 1942 Aug. 7, 1943 May 15, 1944	5.76 5.50 5.54	44 34 38	1946	July 19, 1946	6.80	93				

1415. Youngs Creek near Cedaredge, Colo.

<u>Location</u>.--Lat 38°55', long 107°57', in SW_{ψ}^1 sec.18, T.13 S., R.94 W., three-eighths of a mile upstream from mouth and 2 miles northwest of Cedaredge.

Drainage area. -- 19 sq mi, approximately.

Gage .-- Nonrecording. Altitude of gage is 6,550 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 62 cfs.

Remarks. -- Natural flow of stream affected by storage reservoirs, diversions exporting water to and importing water from nearby streams, diversions for irrigation, and return flow from irrigated areas. Diversions and regulation substantially affect peak flows. Records for 1939-41 furnished by Eureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year		Date	Gage height (feet)	Discharge (cfs)
1941 1942	May 12, 1941 Apr. 14, 1942	6.70 5.80	127 65	1945	May	3, 1945	5.78	63
1943 1944	June 2, 1943 May 15, 1944	4.60 6.20	7.6 83.	1946	May	6, 1946	4.58	10

1420. Ward Creek below Kiser Creek, near Cedaredge, Colo.

<u>Location</u>. --Lat 38°53', long 107°58', in SE¹/₄ sec.26, T.13 S., R.95 W., on right bank 15 ft downstream from highway bridge, 1 mile downstream from Kiser Creek, and 3 miles southwest of Cedaredge.

Drainage area. -- 58 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 5,660 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 180 cfs.

Bankfull stage .-- 3 ft.

Remarks.--Natural flow of stream affected by diversions exporting water to and importing water from nearby streams, storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Diversions and regulation substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges of Ward Creek below Kiser Creek, near Cedaredge, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 11, 1945	3.34	139	1949 1950	May 25, 1949 May 4, 1950	2.64	58 20
1946	July 19, 1946	3.05	109				
1947	July 9, 1947	3.33	139	1951	July 16, 1951	2.11	21
1948	Apr. 21, 1948	3.68	168	1952	Apr. 18, 1952	3.78	193

1430. Surface Creek near Cedaredge, Colo.

Location. --Lat 38°59', long 107°51', in $NW_{\overline{u}}^{\frac{1}{4}}NW_{\overline{u}}^{\frac{1}{4}}$ sec.25, T.12 S., R.94 W., on left bank 5 ft downstream from private bridge, $1\frac{1}{2}$ miles downstream from Caesar Creek, and 7 miles northeast of Cedaredge.

Drainage area. -- 28 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,180 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 460 cfs.

Remarks.--Flow regulated by many small reservoirs. One diversion imports water from Leon Lake in Plateau Creek drainage. Diversions substartially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 6, 1940	2.66	293	1952 1953	May 14, 1952 May 28, 1953	3.07 2.40	508 221
1941	May 12, 1941	3.62	578	1954	May 19, 1954	2.23	172
1942	Oct. 13, 1941	3.26	432	1955	May 14, 1955	2.56	308
1943	Apr. 30, 1943	2.54	248			1	
1944	May 23, 1944	3.45	490	1956	Mar. 28, 1956	a3.35	-
1945	May 11, 1945	2.61	269		May 7, 1956	-	234
				1957	June 6, 1957	3.96	517
1946	Apr. 24, 1946	2.15	156	1958	Apr. 13, 1958	a5.10	-
1947	May 3, 1947	3.05	410		June 5, 1958	-	509
1948	May 21, 1948	2.61	258	1959	May 14, 1959	2.22	155
1949	May 3, 1949	2.50	230	1960	May 12, 1960	2.54	279
1950	May 21, 1950	2.34	202	1		1	
		l		1961	May 11, 1961	2.38	215
1951	May 27, 1951	2.33	192	1962	May 9, 1962	2.65	298

a Backwater from ice.

1435. Surface Creek at Cedaredge, Colo.

Location --Lat 38°54', long 107°55', in sec.20, T.13 S., R.94 W., on right bank at Cedaredge, 500 ft east of State Highway 65 and 8½ miles upstream from mouth.

Drainage area. -- 39.5 sq mi.

<u>Gage</u>.--Nonrecording at datum 0.5 ft higher prior to June 8, 1917; recording and concrete control thereafter. Altitude of gage is 6,500 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 640 cfs.

Remarks.--Natural flow of stream affected by diversions exporting water to and importing water from nearby streams, many small storage reservoirs, diversions for irrigation and return flow from irrigated areas. Diversions and regulation affect peak flows substantially. Peak flows are principally from snowmelt. Records for 1928-38 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges of Surface Creek at Cedaredge, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	June 24, 1917	1.75	550	1941	May 13, 1941	2.50	1,190
1918	May 14, 1918	1.5	330	1942	May 11, 1942	1.43	326
1919	Apr. 23, 1919	-	200	1943	June 2, 1943	1.24	210
1920	May 24, 1920	1.95	715	1944	May 16, 1944	1.85	622
	[-	ſ		1945	May 11, 1945	1.42	263
1921	June 7, 1921	1.80	442		1		
1922	May 5, 1922	-	660	1946	Apr. 28, 1946	1.09	122
1923	May 26, 1923	1.68	314	1947	June 21, 1947	1.38	274
1924	May 3, 1924	1.42	215	1948	Apr. 30, 1948	1.44	311
1925	Sept.19, 1925	1.60	282	1949	May 2, 1949	1.26	212
	i			1950	Apr. 21, 1950	1.11	154
1926	May 21, 1926	1.60	282	ŀ			
1927	May 2, 1927	1.76	535	1951	May 27, 1951	1.04	132
1928	May 1, 1928	1.76	584	1952	May 5, 1952	1.63	361
1929	May 15, 1929	2.05	652	1953	May 21, 1953	1.16	153
1930	Apr. 21, 1930	1.45	292	1954	Apr. 18, 1954	1.38	119
				1955	May 14, 1955	1.72	186
1931	May 17, 1931	1.12	124	1			3.50
1932	May 15, 1932	1.78	686	1956	May 6, 1956	1.57	152
1933	May 20, 1933	1.56	250	1957	June 6, 1957	2.27	396 337
1934	May 4, 1934	.97	102	1958	May 5, 1958	2.15	337
1935	May 25, 1935	1.24	189	1050	June 5, 1958	1.44	110
1070	M 4 3070	1 74	077	1959	May 14, 1959	1.44	140
1936	May 4, 1936	1.34	273 650	1960	May 12, 1960	_	140
1937	May 10, 1937	1.90	510	1961	May 11, 1961	1.55	148
1938	May 14, 1938	1.70	120	1961		1.89	254
1939 1940	Apr. 30, 1939	1.04	224	1302	May 9, 1962	1.03	254
1940	Apr. 26, 1940	1.34	224	L		L	L

1440. Surface Creek at Eckert, Colo.

<u>Location</u>.--Lat 38°50', long 107°58', in SE_{4}^{1} sec.14, T.14 S., R.95 W., a quarter of a mile west of State Highway 65, 0.5 mile southwest of Eckert, and $2\frac{1}{4}$ miles upstream from mouth.

Drainage area. -- 55 sq mi, approximately.

Gage. --Nonrecording prior to Sept. 12, 1944; recording thereafter. At site 1,000 ft upstream prior to Sept. 26, 1946. At different datum prior to Apr. 2, 1942, and at datum 12 ft higher Apr. 2, 1942, to Sept. 25, 1946. Altitude of gage is 5,450 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 310 cfs.

Bankfull stage . -- 6 ft.

Remarks.--Natural flow of stream affected by diversions to and from nearby streams, storage reservoirs, and diversions for irrigation. Diversions, inflow, and storage substantially affect peak flows. Records for 1939-41 furnished by Bureau of Reclamation. Only annual peaks are shown.

		2	eak stages a	na arsen	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941 1942 1943 1944 1945	May 13, 1941 May 23, 1942 June 2, 1943 May 15, 1944 May 11, 1945	4.20 2.86 2.70 4.06 3.29	550 185 156 466 236	1947 1948 1949 1950	June 21, 1947 Apr. 28, 1948 May 2, 1949 Apr. 20, 1950	4.09 4.20 3.39 2.93	262 290 129 78
1946	Apr. 28, 1946	2.31	74	1951	May 7, 1951	2.61	53

1445. Red Mountain Creek near Ironton, Colo.

Location.--Lat 37°57'45", long 107°39'40", in N_2^1 sec.29, T.43 N., R.7 W., on right bank 100 ft from U.S. Highway 550, 2 miles northeast of Ironton, and 2 miles upstream from mouth.

Drainage area .-- 17.8 sq mi.

Gage.--Recording. Datum of gage is 9,585.58 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 290 cfs.

Bankfull stage .-- 6 ft.

Remarks. -- Water is imported above station by Red Mountain ditc? from Mineral Creek in San Juan River basin. No diversion for irrigation above station. Peak flows are principally from snowmelt. Base for partial-duration series, 250 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 19, 1948 June 3, 1948	4.55 4.36	307 258	1952	June 6, 1952 June 15, 1952	4.21 4.23	278 282
1949	June 18, 1949	4.42	331	1953	June 12, 1953	4.38	330
1950	May 30, 1950	3.88	178	1954	May 21, 1954	3.69	157
1951	May 27, 1951	4.07	229	1955	June 8, 1955	4.15	295

1450. Uncompangre River at Ouray, Colo.

Location. --Lat 38°01'10", long 107°40'30", in sec.31, T.44 N., R.7 W., in box canyon at southwest edge of Ouray, a short distance upstream from highway bridge and 150 ft upstream from Canyon Creek.

Drainage area. -- 44 sq mi, approximately.

<u>Gage</u>.--Nonrecording prior to Apr. 22, 1919; recording thereafter. Altitude of gage is 7,800 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 600 cfs.

Remarks. -- One diversion for power above station; water is returned to river below station. Figures given herein include flow diverted around station through powerplant. Diversion does not substantially affect peak flows. Feak flows are principally from snowmelt. Base for partial-duration series, 650 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	July 13, 1911	3.4	665	1919	May 29, 1919	3.3	606
1912	Oct. 5, 1911	6.0	1,980	1920	May 25, 1920 June 9, 1920	3.7 3.65	884 830
1913	May 27, 1913	4.0	950	1921	June 11, 1921	5.97	2,000
1914	June 1, 1914	4.9	1,400	1922	June 13, 1922	3.60	845
1915	June 19, 1915	3.6	720		1		
1916	June 11,13,1916	3.2	643	1923	May 26, 1923	3.55	805
1917	June 19,30, 1917	4.3	1,140	1924	June 6, 1924 June 13, 1924	3.63 3.98	735 864
1918	June 11, 1918	4.8	1,400				

1455. Canyon Creek at Ouray, Colo.

Location. -- Lat 38°01'05", long 107°40'35", in sec.31, T.44 N., R.7 W., on vertical rock cliff 200 ft upstream from mouth at Ouray.

Drainage area. -- 26 sq mi, approximately.

Gage.--Nonrecording. At footbridge 115 ft downstream at datum 3.00 ft lower prior to Aug. 31, 1913. Altitude of gage is 7,750 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 280 cfs.

Remarks. -- No diversion above station. Only annual peaks are shown.

Peak stag	es and	discharges
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Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911 1912 1913	July 13, 1911 Oct. 5, 1911 May 27, 1913	2.6 4.2 2.8	368 680 43 5	1914 1915	June 2, 1914 June 21, 1915	5.2 4.4	660 514

1460. Uncompangre River below Ouray, Colo.

Location.--Lat 38°01'50", long 107°40'30", in sec.30, T.44 N., R.7 W., a cuarter of a mile north of Ouray and 1 mile downstream from Canyon Creek.

Drainage area .-- 76 sq mi, approximately.

Gage.--Nonrecording prior to Mar. 28, 1917; recording thereafter. At site 500 ft downstream at different datum prior to Mar. 22, 1916. Altitude of gage is 7,670 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Remarks.--One small diversion above station does not substantially affect peak flows. Peak flows are principally from snowmelt. Record for 1929 furnished by State engineer of Colorado. Base for partial-duration series, 830 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 31, 1914	5.8	2,260	1922	June 8, 1922	4.62	1,410
1915	June 18, 1915	4.74	1,400	1923	June 3, 1923	4.21	956
1916	June 9, 1916	4.10	1,100		June 15, 1923 June 26, 1923 July 20, 1923	4.26 4.38 5.4	986 1,060 1,780
1917	June 18, 1917	5.3	2,060				,
1918	June 14, 1918	5.5	1,700	1924	June 6, 1924 June 15, 1924	4.49 5.10	1,060 1,450
1919	June 15, 1919	4.05	760	1925	May 30, 1925 June 23, 1925	4.46 4.53	1,120 1,130
1920	May 30, 1920 June 9, 1920	4.75 5.1	1,130 1,210		July 20, 1925	4.92	1,340
	June 21, 1920 Aug. 9, 1920	4.62 4.11	1,060 835	1926	June 6, 1926	5.10	1,320
1921	May 29, 1921	4 57	3 040	1927	May 17, 1927	4.01	866
1321	May 29, 1921 June 11, 1921	4.53 6.05	1,040 2,400		June 9, 1927 June 28, 1927	4.10 6.10	830
	June 26, 1921	4.46	990		July 28, 1927	13.3	2,150 2,000
	July 16, 1921 July 25, 1921	4.56 5.40	1,020 1,680		Sept. 9, 1927	6.53	1,610
1922	May 5, 1922	4.08	944	1928	May 31, 1928	3.82	962
	May 26, 1922	4.00	988	1929	June 20, 1929	3.90	824

1464. West Fork Dallas Creek near Ridgway, Colo.

Location. --Lat 38°04'30", long 107°51'10", in $SE_{\frac{1}{2}}^{\frac{1}{2}}$ sec.9, T.44 N., R.9 W., on right bank 100 ft downstream from unnamed tributary, 5 miles upstream from confluence with East Fork Dallas Creek, and $7\frac{1}{2}$ miles southwest of Ridgway.

Drainage area .-- 13.2 sq mi.

Gage. -- Recording. Altitude of gage is 8,400 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 73 cfs.

Remarks.--One diversion above station does not materially affect peak flows.

Peaks are primarily from snowmelt. Base for partial-duration series, 30 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	June 4, 1956	2.43	42	1959	Aug. 7, 1959	2.25	43
1957	May 5, 1957 June 5, 1957 July 2, 1957	2.40 2.75 3.40	34 65 187	1960	June 5, 1960 June 18, 1960	2.47 2.53	65 78
	July 29, 1957 Aug. 31, 1957	2.74	(a) 67	1961	Dec. 6, 1960 May 2, 1961 May 19, 1961	c3.25 2.39 2.34	- 34 30
1958	Apr. 22, 1958 May 11, 1958 May 30, 1958 June 7, 1958	2.42 2.46 2.77	31 41 84 b90		June 6, 1961 June 21, 1961 Aug. 3, 1961	2.53 2.49 2.45	39 46 41
1959	June 10, 1959 June 18, 1959 Aug. 4, 1959	2.33 2.38 2.41	59 69 73	1962	(d) May 13, 1962 June 14, 1962 June 30, 1962	c3.97 2.39 2.40	- 33 36 b60

a Unknown; probably exceeded base discharge. curred during period Mar. 20 to Apr. 11, 1962.

b About. c Ice jam. d Oc-

1465. East Fork Dallas Creek near Ridgway, Colo.

<u>Location</u>.--Lat 38°05'40", long 107°48'40", in $SE_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.2, T.44 N., R.9 W., on right bank 300 ft below private bridge, 2 miles upstream from Beaver Creek, and 5 miles southwest of Ridgway.

Drainage area. -- 16.8 sq mi.

<u>Gage.</u>--Recording. At two sites three-quarters of a mile downstream at different datums prior to Oct. 1, 1960. Datum raised 3.00 ft Oct. 1, 1949. Altitude of gage is 7,980 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 140 cfs.

Bankfull stage .-- 4 ft.

Remarks.--One small diversion above station diverts water to Beaver Creek drainage for irrigation of 50 acres of hay meadows. Diversion does not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 120 cfs.

Peak stages and discharges

Water year	Date _.	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	June 6, 1948 June 13, 1948	2.18 2.30	130 153	1952	July 6, 1952	3.57	183
				1953	June 12, 1953	3.56	158
1949	June 18, 1949	3.43	297		June 24, 1953	3.56	140
	June 23, 1949	2.63	240		July 16, 1953	3.37	132
	July 5, 1949	2.51	160				
				1961	June 13, 1961	3.50	164
1950	June 16, 1950	3.55	97		June 21, 1961	3.50	159
1951	June 16, 1951	3.46	85	1962	Dec. 13, 1961	a4.28	-
	,				June 14, 1962	3.06	122
1952	June 15, 1952	3.64	207	l	July 1, 1962	3.65	209

a Backwater from ice.

1466. Pleasant Valley Creek near Noel, Colo.

<u>Location</u>.--Lat 38°08'50", long 107°55'00", in $SE_u^1SW_u^2$ sec.13, T.45 N., R.10 W., on right bank 3 miles north of Noel and 7 miles upstream from mouth.

Drainage area. -- 7.88 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 8,680 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 140 cfs.

Remarks.--Diversions above station for irrigation do not materially affect peak flows. Peaks are primarily from snowmelt. Base for partial-duration series, 50 cfs.

Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Apr. 12, 1956 July 29, 1956	3.10 2.80	8 4 50	1958	May 1, 1958 May 4, 1958 Aug. 17, 1958	2.86 2.82 2.85	88 83 55
1957	Apr. 17, 1957 May 2, 1957 May 21, 1957 July 12, 1957 July 29, 1957 Aug. 7, 1957	3.25 3.35 3.09 3.00 4.60 3.33 4.16	102 129 79 86 500 116 308	1959 1960	Apr. 23, 1959 Apr. 10, 1960 Apr. 15, 1960 Apr. 18, 1960	2.58 3.64 3.02 2.93	35 248 113 88
	Aug. 20, 1957 Aug. 21, 1957 Aug. 31, 1957	2.90 3.64	93 210	1961	Apr. 22, 1961 Apr. 28, 1961	3.28 3.36	139 155
1958	Apr. 20, 1958 Apr. 27, 1958	3.39 2.77	162 78	1962	Apr. 17, 1962	3.27	159

1470. Dallas Creek near Ridgway, Colo.

<u>Location</u>.--Lat 38°10'30", long 107°45'40", in $SE_{4}^{\frac{1}{2}}$ sec.5, T.45 N., R.8 W., 20 ft downstream from highway bridge, $l_{2}^{\frac{1}{2}}$ miles northwest of Ridgway, and $l_{2}^{\frac{1}{2}}$ miles upstream from mouth.

Drainage area. -- 90 sq mi, approximately.

Gage.--Nonrecording prior to October 1955; recording thereafter. Altitude of gage is 6,980 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 160 cfs.

Remarks.--Diversions for irrigation of 5,200 acres probably affect peak flows substantially. Peak flows are principally from snowmelt. Records furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

	reak budges and albeitalges							
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	fischarge (cfs)	
1922 1923 1924 1925	Apr. 30, 1922 Aug. 15, 1923 May 3, 1924 Apr. 17, 1925	2.95 4.40 3.50 2.70	518 1,120 996 504	1957 1958 1959 1960	July 29, 1957 Apr. 22, 1958 Aug. 4, 1959 Apr. 10, 1960	4.96 4.55 3.92 4.42	509 399 241 391	
1926 1927 1956	Apr. 23, 1926 June 28, 1927 Apr. 12, 1956	2.50 2.90 3.52	306 478 146	1961 1962	June 30, 1961 Dec. 14, 1961 Apr. 17, 1962	4.16 a4.38	298 - 304	

a Backwater from ice.

1471. Cow Creek near Ridgway, Colo.

Location.--Lat 38°08'20", long 107°38'20", in $N\frac{1}{2}$ sec.21, T.45 N., R.7 W., on left bank 400 ft upstream from Cobbs Gulch and $6\frac{1}{2}$ miles southeast of Ridgway.

Drainage area .-- 41.1 sq mi.

Gage .-- Recording. Altitude of gage is 7,900 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 840 cfs.

Remarks. -- No diversion above station. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 31, 1956	5.15	628	1959	June 9, 1959 June 14, 1959	5.05 4.93	532 525
1957	June 5, 1957 June 20, 1957 June 28, 1957	5.65 5.67 7.70	816 844 1,360	1960	June 2, 1960 June 16, 1960	5.10 5.02	595 672
1958	May 30, 1958	5.43	549 855	1961	June 9, 1961	4.70	500
	June 7, 1958 June 20, 1958	5.85 5.08	588	1962	June 11, 1962	4.48	440

1475. Uncompandere River at Colona, Colo. (Published as "near Colona" 1904-6, 1922-34)

Location. --Lat 38°19'50", long 107°46'40", in $NW_{\overline{u}}^{1}$ sec.17, T.47 N., R.8 W., on left bank 50 ft downstream from county highway bridge, a quarter of a mile north of Colona, and 1 mile upstream from Beaton Creek.

Drainage area .-- 437 sq mi.

Gage. -- Nonrecording prior to June 24, 1921; recording thereafter. At several sites within 5 miles of present site at various datums prior to Oct. 29, 1938. At datum 3.00 ft higher Oct. 29, 1938, to Aug. 2, 1949, and 1.00 ft higher Aug. 3 to Sept. 30, 1949. Datum of gage is 6,318.80 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 2,300 cfs.

Remarks.--Natural flow of stream affected by water imported from Cimarron Creek, Mineral Creek, and San Miguel River drainages, diversions for irrigation of about 19,000 acres, and return flow from irrigated areas. Diversions substantially affect peak flows. Records for 1921-31 furnished by Bureau of Reclamation and those for 1932-34 by Uncompangre Valley Water Users' Association. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	June 13, 1903	4.5	1,850	1936	May 29, 1936	3.34	1,130
1904	June 2, 1904	2.9	1,350	1937	Aug. 28, 1937	4.50	2,240
1905	June 9, 1905	4.4	1,980	1938	June 22, 1938	4.60	3,390
1921	June 13, 1921	3.21	4,080	1939	June 5, 1939	3.65	1,060
1922	June 14, 1922		1,610	1940	June 1, 1940	3.08	1,850
1923	July 20, 1923	3.00	1,720	1941	June 23, 1941	3.50	2,540
1924	June 15, 1924	3.43	1,840	1942	June 7, 1942	3.35	2,490
1925	June 24, 1925	3.11	1,540	1943	Aug. 17, 1943	2.50	1,400
1926	June 6, 1926	4.63	2,000	1944	June 21, 1944	3.82	2,240
1927	June 28, 1927	5.45	3,400	1945	June 22, 1945	3.44	1,840
1928	May 29, 1928	4.40	2,040	1946	June 7, 1946	2.70	1,330
1929	July 26, 1929	4.86	2,920	1947	June 21, 1947	3.50	1,790
1930	June 12, 1930	4.00	1,940	1948	May 19, 1948	3.80	1,930
1931	June 16, 1931	2.72	958	1949	June 19, 1949	3,65	2,860
1932	June 25, 1932	3.63	1,620	1950	June 12, 1950	4.62	1,260
1933	June 1, 1933	4.12	1,900	1951	June 17, 1951	4.52	996
1934	May 10, 1934	2.90	915	1952	June 16, 1952	5.40	2,680
1935	June 14, 1935	3.67	1,750	1953	June 13, 1953	5.68	2,570

Peak stages and discharges of Uncompangre River at Colona, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954 1955	July 22, 1954 June 8, 1955	4.60 5.43	620 1,700	1959 1960	June 10, 1959 June 4, 1960	4.68 4.36	1,540 1,630
1956 1957 1958	June 1, 1956 June 29, 1957 June 7, 1958	4.60	1,240 3,300 2,400	1961 1962	June 9, 1961 June 30, 1962	4.52 4.65	1,320 1,330

1480. Uncompangre River at Fort Crawford, Colo.

<u>Location</u>.--Lat 38°22'40", long 107°48'30", in $NE_{L}^{1}NW_{L}^{1}$ sec.36, T.48 N., R.9 W., half a mile east of Old Fort Crawford (Uncompangre) and 3.7 miles northwest of Colona.

Drainage area. -- 490 sq mi.

Gage.-Nonrecording. At about same site prior to Dec. 1, 1909. At different datum prior to Oct. 1, 1899, and at datum 5.15 ft higher Mar. 28, 1908, to Nov. 30, 1909. Altitude of gage is 6,150 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Remarks.--Natural flow of stream affected by water imported from Cimarron Creek, diversions for irrigation of about 20,000 acres above station, and return flow from irrigated areas. Diversions probably affect peak flows substantially. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	May 27, 1896	5.5	1,850	1908	June 11, 1908	4.6	1,340
1897 1898 1899	June 15, 1897 June 24, 1898 June 13, 1899	5.6 5.8 6.0	1,700 1,010 1,250	1910	June 1, 1910	3.0	1,370

1490. Uncompangre River at Montrose, Colo.

Location.--Lat 38°28'30", long 107°53'10" in sec.28, T.49 N., R.9 W., at high-way bridge a quarter of a mile west of Montrose and 2 miles upstream from Happy Canyon Creek.

Drainage area. -- 565 sq mi.

 $\underline{\text{Gage.--Nonrecording.}}$ At datum 1.45 ft lower in 1903. Altitude of gage is 5,780 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements.

Remarks. --Natural flow of stream affected by water imported from Gunnison River, diversions for irrigation of about 15,000 acres above the Uncompangre project, diversion by three of the seven main canals of the Uncompangre project (75,000 acres) for irrigation of land both above and below the station, and return flow from irrigated areas. Inflow and diversion substantially affect peak flows. Records for 1907-23 furnished by Bureau of Reclamation. Only annual peaks are shown.

	reak Boages and Gischarges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1903 1904 1905	June 13, 1903 May 24, 1904 June 4, 1905	7.3 4.2 6.2	2,500 620 2,350	1914	June 2, 1914	6.40	2,330				

1495. Uncompandere River at Delta, Colo. (Published as "near Delta" 1907-24)

<u>Location</u>.--Lat 38°45', long 108°05', in $SW_{\overline{4}}^1$ sec.13, T.15 S., R.96 W., on right bank 100 ft upstream from bridge on State Highway 92, at west edge of Delta, and $1\frac{1}{4}$ miles upstream from mouth.

Drainage area. -- 1,110 sq mi, approximately.

Gage. --Nonrecording prior to Oct. 31, 1923, and May 9, 1941, to Apr. 25, 1946; recording for other periods. At several sites a quarter to 2 miles upstream at various datums prior to Oct. 31, 1923. At site 50 ft upstream at different datum Apr. 26, 1924, to Nov. 2, 1931. At site 330 ft downstream Sept. 1, 1938, to May 5, 1941; 250 ft downstream May 9, 1941, to Apr. 25, 1946; 150 ft downstream Apr. 26, 1946, to Feb. 17, 1960. Datum of gage is 4,929.92 ft above mean sea level, datum of 1929.

 $\frac{Stage-discharge\ relation}{2,600\ cfs\ and\ extended} \ above\ on\ basis\ of\ slope-area\ measurement\ at\ 3,500\ cfs.$

Remarks. -- Natural flow of stream affected by water imported from Gunnison River and other adjacent basins, diversions for irrigation of about 90,000 acres above station, and return flow from irrigated areas. Diversions substantially affect peak flows. Records prior to 1924 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903 1904 1905	June 15, 1903 Sept. 1, 1904 June 10, 1905	7.00 3.45 4.50	2,630 1,000 1,890	1939 1940	Oct. 8, 1938 Sept.30, 1940	3.24 4.25	1,080 1,980
1906	May 25, 1906	4.30	1,680	1941 1942 1943	May 5, 1941 Apr. 23, 1942 Aug. 19, 1943	5.90 4.38 4.64	3,730 2,420 2,330
1908 1909 1910	Aug. 11, 1908 June 19, 1909 May 31, 1910	3.05 4.7 4.2	515 1,150 900	1944 1945	May 16, 1944 May 8, 1945	5.10 4.40	3,340 1,920
1911	July 4, 1911	4.3	795	1946 1947 1948	Aug. 24, 1946 July 16, 1947 Oct. 15, 1947	4.51 5.09 6.26	1,430 2,180 3,500
1914 1916	May 10, 1914 Aug. 14, 1916	3.95 3.75	1,750 1,310	1949 1950	June 19, 1949 June 12, 1950	6.00 3.92	2,840 780
1921 1922	June 12, 1921 May 6, 1922	- 4.30	2,490 1,450	1951 1952 1953	May 28, 1951 May 5, 1952 June 13, 1953	4.30 5.57 5.89	900 1,910 2,430
1923 1924 1925	May 17, 1923 May 29, 1924 July 5, 1925	4.00 4.3 4.4	1,530 1,670 1,740	1954 1955	Oct. 23, 1953 June 9, 1955	4.62 4.96	1,200 1,220
1926 1927	June 7, 1926	3.81 5.90	1,420	1956 1957 1958	May 31, 1956 Aug. 31, 1957 June 7, 1958	4.58 6.19 6.62	958 2,070 2,290
1928 1929	June 29, 1927 May 3, 1928 Sept. 6, 1929	4.50 5.70	2,880 1,630 2,620	1959 1960	June 10, 1959 June 19, 1960	4.80 5.62	1,080
1930 1931	Aug. 10, 1930 Oct. 4, 1930	5.40 3.07	2,340 742	1961 1962	Sept.23, 1961 May 10, 1962	6.51 6.12	1,700 1,490

1505. Roubideau Creek at mouth, near Delta, Colo.

Location.--Lat 38°44', long 108°09', in sec.19, T.15 S., R.96 W., on left bank 90 ft upstream from railroad bridge, a quarter of a mile upstream from mouth, and 5 miles west of Delta.

Drainage area. -- 245 sq mi.

Gage.--Recording. At site a quarter of a mile upstream at datum 4.86 ft higher prior to Oct. 27, 1948. Datum of gage is 4,864.34 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Remarks.--Part of discharge is return flow from irrigated lands under lower end of Ironstone Canal from Uncompangre River. Diversions for irrigation of a few hundred acres above station do not substantially affect peak flows. Base for partial-duration series, 810 cfs.

Peak stages and discharges of Roubideau Creek at mouth, near Delta, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 1, 1939	3.84	802	1946	Sept.15, 1946	4.37	966
1940	May 17, 1940 Sept.30, 1940	4.18 4.06	923 880	1947	Sept. 6, 1947	3.88	806
1941	Oct. 6, 1940 May 13, 1941 June 7, 1941 Aug. 9, 1941	4.20 6.40 4.03 5.50	925 2,180 932 1,560	1948	Apr. 22, 1948 May 1, 1948 May 8, 1948 May 15, 1948 July 19, 1948	4.52 5.16 5.32 5.03 6.32	1,110 1,410 1,490 1,320 1,990
1942	Apr. 15, 1942 Apr. 23, 1942 May 11, 1942 May 24, 1942	4.67 6.40 5.15 5.10	1,190 2,000 1,400 1,380	1949	May 4, 1949 May 16, 1949 Aug. 8, 1949	4.41 4.16 4.56	1,000 887 1,070
1943	May 1, 1943 May 5, 1943 Aug. 17, 1943	4.20 3.85 4.34	1,020 884 1,060	1950 1951	Apr. 24, 1950 May 12, 1951	3.93 2.88	804 403
1944	May 15, 1944 May 24, 1944	6.04 5.38	1,820 1,510	1952	Apr. 28, 1952 May 5, 1952 July 29, 1952	4.23 6.00 5.28	914 1,500 1,180
1945	May 8, 1945 Aug. 5, 1945	5.93 7.76	1,680 2,950	1953 1954	June 18, 1953 Oct. 23, 1953	3.81 3.98	57 4 6 4 2

1520. Kahnah Creek near Whitewater, Colo.

Location. -- Lat 38°59', long 108°14', in sec.34, T.12 S., R.97 W., on right bank at downstream side of private bridge, a quarter of a mile downstream from intake of pipeline for Grand Junction water supply, and 12 miles east of Whitewater.

Drainage area .-- 55.0 sq mi.

Gage.--Nonrecording prior to Sept. 30, 1932; recording thereafter. At site 300 ft upstream at different datum Sept. 30, 1932, to Oct. 14, 1935.

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 700 cfs. Bankfull stage.-- $3\frac{1}{2}$ ft.

Remarks.--Diversion above station for municipal supply of Grand Junction, and since Apr. 5, 1940, by Raber ditch for irrigation of 60 acres below station. Some regulation by a few small reservoirs above station. Figures given herein represent total flow of creek above diversions. Peak flows are principally from snowmelt. Complete records for 1922-33 and all records of diversion furnished by State engineer of Colorado. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918 1919 1920	May 23, 1918 May 20, 1919 June 5, 1920 June 6, 1921	2.74 3.06 4.00	556 601 1,360 1,640	1946 1947 1948 1949 1950	May 5, 1946 May 7, 1947 May 19, 1948 May 25, 1949 May 21, 1950	2.21 2.55 3.01 2.11 2.02	504 724 1,010 582 538
1933 1934 1935	June 1, 1933 Apr. 25, 1934 June 6, 1935	3.3 2.05 3.82	1,020 264 1,300	1951 1952 1953	May 27, 1951 May 14, 1952 May 31, 1953	2.27 2.46	675 520 611
1936 1937	May 16, 1936 May 15, 1937	1.94 2.31	448 734	1954 1955	May 9, 1954 May 14, 1955	-	351 634
1938 1939 19 4 0	May 28, 1938 May 10, 1939 May 13, 1940	2.67 1.75 2.32	992 448 700	1956 1957 1958	May 7, 1956 June 9, 1957 May 23, 1958	-	514 772 726
1941 1942	June 7, 1941 May 26, 1942	2.31 2.40	517 735	1959 1960	May 15, 1959 May 14, 1960	-	456 379
1943 1944 1945	Apr. 30, 1943 June 9, 1944 May 26, 1945	2.12 2.37 2.37	569 757 720	1961 1962	May 22, 1961 May 12, 1962	-	419 559

1525. Gunnison River near Grand Junction, Colo. (Published as "at Whitewater" 1901-6)

Location.--Lat 38°59', long 108°27', near center of sec.14, T.2 S., R.1 E., Ute meridian, on right bank 180 ft upstream from bridge on State Highway 141, 0.4 mile downstream from Whitewater Creek, 0.5 mile south of Whitewater, and 8 miles southeast of Grand Junction.

Drainage area. -- 7,870 sq mi, approximately.

Gage.--Nonrecording prior to June 24, 1934; recording thereafter. At present site at datum 1.04 ft lower prior to October 1906. At site 11½ miles downstream at datum 72.98 ft lower Apr. 1, 1917, to Sept. 30, 1959. Datum of gage is 4,628.12 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 22,000 cfs.

Bankfull stage .-- 14 ft.

Remarks.--Natural flow of river affected by diversions for irrigation of about 233,000 acres. Combined flow of river and Redlands power canal represent entire flow that enters Colorado River from Gunnison River basin. Diversions substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

			reak stages a	ind disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1897 1898 1899	May 9, 1897 June 4,19, 1898 May 16, 1899	8.3 5.9 7.5	20,700 11,400 15,700	1936 1937 1938 1939	May 7, 1936 May 16, 1937 May 31, 1938 May 6, 1939	9.51 9.79 10.28 6.83	15,300 15,700 17,600 8,260
1902 1903 1904	May 12, 1902 June 14-16, 1903	8.8 12.1	8,460 17,800	1940	May 13, 1940	7.12	9,020
1904	May 25, 1904 June 9, 1905	9.3 13.7	9,180 27,400	1941 1942 1943	May 14, 1941 May 27, 1942 May 5, 1943	12.45 11.17 8.80	27,500 21,900 13,700
1906	May 21, June 13, 1906	13.1	21,900	1944 1945	May 17, 1944 May 12, 1945	12.80 9.49	27,200 15,800
1917 1918	June 18, 1917 June 14, 1918	12.0	25,000 18,000	1946 1947	June 17, 1946 June 22, 1947	7.91 9.10	10,900 13,900
1919 1920	May 22, 1919 May 23, 1920	8.0 14.95	11,400 35,700	1948 1949 1950	May 20, 1948 June 19, 1949 Apr. 24, 1950	11.58 11.11 6.96	22,200 19,300 8,240
1921 1922	June 15, 1921 May 7, 1922	13.3 11.3	30,100 22,500	1951	May 29, 1951	7.87	9,950
1923 1924 1925	May 28, 1923 May 28, 1924 Apr. 18, 1925	10.1 8.3 7.1	18,400 12,800 9,210	1952 1953 1954	May 6, 1952 June 14, 1953 Oct. 23, 1953	12.70	23,300 14,100 4,570
1926	June 7, 1926	8.95	14,200	1955	May 9, 1955	-	8,150
1927 1928 1929	May 18, 1927 May 3, 1928 May 26, 1929	10.17 11.0 11.35	18,200 21,400 23,100	1956 1957 1958	June 3, 1956 June 6, 1957 May 24, 1958	-	8,670 27,800 20,400
1930	May 31, 1930	8.40	12,400	1959 1960	June 15, 1959 May 14, 1960	7.70	7,160 9,500
1931 1932 1933	May 18, 1931 May 23, 1932 June 2, 1933	4.5 10.2 10.35	3,920 18,500 19,000	1961 1962	May 29, 1961 May 13, 1962	6.98 10.48	7,830 17,000
1934 1935	July 21, 1934 June 15, 1935	9.78	4,820 16,400		1120 229 2002		21,000

1530. Colorado River near Fruita, Colo.

Location. --Lat 39°08!, long 108°44!, in sec.20, T.1 N., R.2 W., Ute special base and meridian, at highway bridge 1 mile upstream from Little Salt Wash, 1½ miles south of Fruita, and 12 miles downstream from Gunnison River.

Drainage area. -- 17,100 sq mi, approximately.

Gage.--Nonrecording. At datum 0.05 ft lower prior to May 3, 1911. Altitude of gage is 4,490 ft (from Grand Valley irrigation project map).

Stage-discharge relation. -- Defined by current-meter measurements below 38,000 cfs.

Historical data.--Maximum discharge known, 125,000 cfs July 4, 1884 (gage height, 18.5 ft, from reports of U.S. Weather Bureau), discharge computed by combining flow in main channel from extension of 1921 rating curve and flow in overflow area from levels in 1917.

Remarks.--Natural flow of stream affected by transmountain diversions, power developments, diversions for irrigation, and return flow from irrigated areas. Diversions substantially affect peak flows. Peak flows are prircipally from snowmelt. Only annual peaks are shown.

t) Di	scharge (cfs)	Water year	Date	
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1908 1909 1910	July 4, 1884 June 13, 1908 June 9, 1909 June 4, 1910	18.5 9.95 14.95 10.95	125,000 27,300 64,000 34,100	1916 1917 1918 1919 1920	June 14, 1916 June 20, 1917 June 14, 1918 May 29, 1919 May 23, 1920	11.2 15.0 13.9 10.2 15.0	39,600 64,000 57,000 32,200 79,100
1911 1912 1913 1914 1915	June 10, 1911 June 7, 1912 May 28,31, 1913 June 3, 1914 June 12, 1915	11.6 14.4 10.0 14.4 10.0	38,800 59,600 27,600 59,600 27,600	1921 1922 1923	June 16, 1921 May 29, 1922 May 29, 1923	15.2 12.5 12.2	81,100 54,100 51,100

Peak stages and discharges

1635. Colorado River near Colorado-Utah State line

<u>Location</u>.--Lat 39°09', long 108°57', in sec.25, T.10 S., R.104 W., on right bank 4,8 miles downstream from Salt Creek, $6\frac{1}{2}$ miles southwest of Mack, Colo., and $7\frac{1}{4}$ miles upstream from Colorado-Utah State line.

Drainage area. -- 17,900 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 4,370 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks .-- Peak discharges materially affected by transmountain diversions, storage reservoirs, power developments, and diversions for irrigation. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951 1952 1953 1954 1955	June 23, 1951 June 9, 1952 June 15, 1953 May 23, 1954 June 10, 1955	11.24 15.25 12.86 7.27 8.52	30,200 52,000 37,300 11,600 17,100	1957 1958 1959 1960	June 9, 1957 May 31, 1958 June 11, 1959 June 5, 1960	16.40 14.18 9.88 10.28	56,800 45,000 23,200 24,700
1956	June 4, 1956	11.13	28,900	1961 1962	May 31, 1961 May 14, 1962	9.18 13.51	19,300 40,500

1650. Dolores River below Rico, Colo.

<u>Location</u>.--Lat 37°38'25", long 108°03'05", in SW_u^1 sec.15, T.39 N., R.11 W., on left bank at upstream side of bridge on State Highway 145, at Dolores-Montezuma County line, half a mile upstream from Ryman Creek, and 4 miles southwest of Rico.

Drainage area. -- 105 sq mi.

Gage.--Recording. Datum of gage is 8,422.23 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1,800 cfs.

Historical data .-- Maximum flood known occurred Oct. 5, 1911.

Remarks.--No diversions above station. Peaks are principally from snowmelt. Base for partial-duration series, 800 cfs.

Peak stages and discharges

	Total Budges and arbonardes										
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1952	May 5, 1952 May 14, 1952 June 10, 1952 July 6, 1952	5.20 5.43 6.15 4.68	1,190 1,370 2,120 1,030	1958	May 11, 1958 May 27, 1958 June 5, 1958	4.81 5.60 5.75	1,050 1,900 1,860				
1055				1959	May 15, 1959	4.15	585				
1953	May 28, 1953 June 3, 1953 June 12, 1953	5.30 4.69 4.89	1,460 1,030 1,170	1960	May 12, 1960 May 22, 1960 June 3, 1960	4.90 4.57 5.05	1,060 833				
1954	May 21, 1954	4.30	786		June 16, 1960	4.78	1,170 938				
1955	June 8, 1955	5.15	1,360	1961	May 19, 1961 June 2, 1961	4.85 4.81	1,020 994				
1956	May 31, 1956	4.65	1,020		Jule 2, 1961	4.01	994				
1957	June 5, 1957 June 27, 1957 July 26, 1957	6.07 5.77 5.38	2,080 2,000 1,520	1962	May 9, 1962 June 13, 1962	5.05 4.60	1,190 860				

1665. Dolores River at Dolores, Colo.

Location.--Lat 37°28', long 108°30', in sec.16, T.37 N., R.15 W., on left bank 70 ft downstream from bridge on State Highway 184 in Dolores and a quarter of a mile upstream from Lost Canyon Creek.

Drainage area. -- 556 sq mi.

Gage.--Nonrecording prior to Oct. 1, 1924; recording thereafter. At site a quarter of a mile upstream at different datum prior to Nov. 1, 1903. At site 70 ft upstream at different datums Aug. 27, 1910, to Nov. 30, 1912, and Apr. 11, 1922, to Mar. 26, 1934. At site 340 ft upstream at datum 6.17 ft higher Mar. 27, 1934, to Oct. 7, 1952. Datum of gage is 6,918.74 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 4,300 cfs.

Remarks.--Diversions for irrigation of about 2,500 acres substantially affect peak flows. Records for 1928-33 furnished by Bureau of Reclamation. Base for partial-duration series, 1,800 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	Sept.23, 1896	4.5	1,560	1902	May 1, 1902	4.7	1,420
1897	May 8, 1897	6.5	3,600	1903	May 14, June 13,	5.7	2,890
1898	Apr. 27, 1898	5.3	2,100	1010		10.0	10.000
1901	May 20, 1901	6.4	3,200	1912	Oct. 5, 1911	10.2	10,000

Peak stages and discharges of Dolores River at Dolores, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 4, 1922	6.98	7,340	1943	May 4, 1943	5.84	3,980
1923	May 26, 1923	6.2	4,850		June 2, 1943	4.86	2,600
1924	May 16, 1924	6.3	4,360	1944	May 16, 1944 May 24, 1944 June 11, 1944	6.90 6.61 6.28	5,670 4,640 3,960
1925	Apr. 15, 1925 May 4, 1925 May 18, 1925 Sept.19, 1925	5.30 5.38 6.40	2,760 2,710 5,600	1945	May 3, 1945 May 28, 1945 June 15, 1945	6.03 5.50 5.17	3,770 2,860 2,370
1926	May 6, 1926 May 25, 1926 June 4, 1926	7.15	5,220 -	1946 1947	June 7, 1946 May 10, 1947	5.27 5.44 5.11	2,720 3,160
1927	May 2, 1927 May 18, 1927 June 28, 1927 Sept. 9, 1927 Sept.13, 1927	4.94 5.07 6.10 3.80 4.50	3,790 4,100 7,030 3,450 5,200	1948	June 10, 1947 Aug. 22, 1947 Apr. 21, 1948 May 7, 1948 May 20, 1948	4.82 5.17 5.20 6.72	2,490 2,020 2,630 2,550 5,040
1928	May 2, 1928 May 9, 1928 June 1, 1928	4.32 4.28 4.45	3,430 3,190 3,480	1949	June 3, 1948 May 3, 1949 May 16, 1949 May 26, 1949	5.83 4.93 4.69 4.86	3,450 2,580 2,460 2,800
1929	Apr. 18, 1929 May 10, 1929 May 15, 1929 May 26, 1929 June 5, 1929	3.63 4.55 4.29 4.13 3.98	2,330 4,250 3,660 3,390 3,130	1950	June 19, 1949 Apr. 23, 1950 May 31, 1950	7.04 4.69 4.58	8,140 2,040 1,880
1930	, ,			1951	May 28, 1951	5.04	2,520
1931	Apr. 22, 1930 May 31, 1930 June 9, 1930 May 18, 1931	3.28 4.00 3.48 2.95	1,940 3,100 2,210 1,540	1952	Apr. 19, 1952 Apr. 27, 1952 May 4, 1952 May 15, 1952	4.87 5.34 6.24 5.82	2,180 3,210 5,440 4,370
1932	Apr. 20, 1932	3.53	2,590		June 4, 1952	5.92	4,620
1002	May 5, 1932 May 18, 1932 June 16, 1932 June 23, 1932	3.85 4.90 4.12 3.83	3,100 4,800 3,000 2,550	1953	May 28, 1953 June 1, 1953 June 13, 1953	8.00 7.32 7.44	2,900 2,190 2,260
1933	May 21, 1933 June 2, 1933 June 11, 1933	3.98 4.52 4.05	2,730 3,900 2,750	1954 1955	May 22, 1954 May 8, 1955 May 15, 1955	7.01 7.08	1,560 1,820 2,040
1934	May 10, 1934	4.30	1,060		June 9, 1955	7.66	2,300
1935	June 15, 1935	6.15	3,650	1956	May 22, 1956 June 1, 1956	7.28 7.50	1,890 2,100
1936	May 6, 1936 May 20, 1936	6.05 5.39	2,880 2,070	1957	May 5, 1957 June 6, 1957 June 14, 1957	8.25 10.68 8.95	3,270 6,690 3,440
1937	Apr. 22, 1937 Apr. 27, 1937 May 5, 1937 May 11, 1937	5.82 5.70 6.24 6.43	3,120 2,950 3,710 4 ,000		June 21, 1957 July 27, 1957 Aug. 31, 1957	9.52 8.88 7.95	4,300 3,350 2,450
1938	May 30, 1937 Apr. 25, 1938 Apr. 30, 1938	5.84 6.85 6.27	2,980 5,090 3,830	1958	Apr. 22, 1958 May 8, 1958 May 28, 1958 June 6, 1958	9.43 8.86 9.50 9.17	3,640 3,160 4,490 4,020
	May 16, 1938 May 29, 1938 June 13, 1938	6.15 6.57 5.78	3,580 4,470 2,980	1959	May 15, 1959	6.43	1,670
1939	June 22, 1938 June 29, 1938 May 6, 1939	5.62 5.43 4.95	2,750 2,620 1,810	1960	Apr. 10, 1960 Apr. 22, 1960 May 13, 1960 May 24, 1960	7.42 7.11 8.42 7.11	2,360 2,070 3,350 2,030
1940	Apr. 23, 1940 May 14, 1940 May 28, 1940	4.67 5.27 5.02	1,540 2,130 1,940		May 29, 1960 June 4, 1960 June 17, 1960	6.94 8.22 7.04	1,890 3,110 1,970
1941	May 14, 1941 May 25, 1941 June 20, 1941	7.72 6.13 6.13	8,070 3,460 3,510	1961	May 3, 1961 May 13, 1961 May 22, 1961 May 29, 1961 June 1, 1961	7.69 7.17 7.90 7.75 7.55	2,350 1,970 2,520 2,400 2,240
1942	Oct. 13, 1941 Apr. 15, 1942 Apr. 23, 1942 May 12, 1942 May 27, 1942	6.30 5.86 5.89 5.80 6.39	3,890 3,790 3,830 3,690 4,780	1962	Apr. 20, 1962 Apr. 25, 1962 May 10, 1962 June 7, 1962	8.51 8.01 8.80 7.03	2,820 2,420 3,210 1,870

1942

1670. Lost Canyon Creek at Dolores, Colo.

<u>Location</u>.--Lat 37°28', long 108°30', in SE_u^1 sec.16, T.37 N., P.15 W., three-guarters of a mile upstream from mouth and three-quarters of a mile south of

Drainage area. -- 81 sq mi, approximately.

Gage. -- Nonrecording prior to Mar. 4, 1941; recording thereafter. At site 450 ft upstream prior to July 28, 1942. At different datum prior to Mar. 4, 1941, and at datum 5.0 ft higher Mar. 4, 1941, to July 27, 1942. Datum of gage is 6,919.64 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 600 cfs.

Bankfull stage. -- 31 ft.

Remarks. -- Small storage reservoirs and diversions for irrigation of about 4,700 acres in San Juan River basin. Regulation and diversions substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height vear (cfs) year (cfs) (feet) (feet) May 7, 1922 May 8, 1923 Apr. 21, 1924 Apr. 15, 1925 4.28 3.79 3.60 2.50 1 +22 1943 Apr. 24, 1943 4.64 578 1923 496 1944 May 13, 1944 3, 1945 5.17 695 1324 442 1945 Мау 5.25 699 1925 290 1946 Apr. 22, 1946 2.75 194 Apr.21,24, 1926 Apr. 25, 1927 1926 4.90 860 1947 May 14, 1947 Apr. 16, 1948 3.98 410 1927 4.50 1948 810 4.42

1675. Dolores River near McPhee, Colo.

486

<u>Location</u>.--Lat 37°34', long 108°34', in NE $\frac{1}{4}$ sec.12, T.38 N., R.16 W., on right bank 0.8 mile downstream from Beaver Creek and $4\frac{1}{2}$ miles northwest of McPhee.

Drainage area. -- 793 sq mi.

Oct. 14, 1941

4.97

Gage .-- Recording. Datum of gage is 6,666.45 ft above mean sea level, unadjusted.

1,590

Stage-discharge relation. -- Defined by current-meter measurements below 6,500 cfs.

Remarks .-- Diversions for irrigation of about 40,000 acres. Diversions substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939 1940	Mar. 25, 1939 May 14, 1940	3.82 3.85	1,900 1,880	1946 1947 1948	June 7, 1946 May 14, 1947 May 20, 1948	3.85 4.50 5.63	1,910 2,870 4,560
1941 1942	May 14, 1941 Oct. 13, 1941	7.48 7.58	8,430 8,650	1949 1950	June 19, 1949 Apr. 8, 1950	7.10 4.28	7,530 2,320
1343 1344 1945	Apr. 6, 1943 May 16, 1944 Apr. 23, 1945	5.28 7.07 6.09	4,060 7,540 5,450	1951 1952	May 28, 1951 May 6, 1952	3.91 6.98	1,890 7,230

1681. Disappointment Creek near Dove Creek, Colo.

<u>Location</u>.--Lat 37°52', long 108°35', in $3E_{\mu}^{1}$ sec.25, T.42 N., R.16 W., a quarter of a mile downstream from ford, $G_{\overline{2}}^{1}$ miles southeast of Cedar, and 19 miles northeast of town of Dove Creek.

Drainage area. -- 145 sq mi.

Gage .-- Recording.

Stage-discharge relation.--Defined by current-meter measurements below 250 cfs and extended above on basis of slope-area measurements at gage heights 7.55 and 10.30 ft.

Remarks.--Small diversion for irrigation above station does not materially affect peak flows. Peaks primarily from snowmelt. Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958 1959	Oct. 20, 1957 Apr. 18, 1958 Sept. 8, 1958 Aug. 4, 1959	6.37 6.00 7.55	623 544 924 1,770	1961	Aug. 2, 1961 Aug. 3, 1961 Aug. 19, 1961 Aug. 23, 1961 Sept.10, 1961	5.90 7.60 7.75 7.40 6.65	515 835 872 790 640
1960	Aug. 6, 1959 Aug. 8, 1959 July 30, 1960	7.80 10.10 6.45	885 1,670 600	1962	Oct. 9, 1961	6.15	552

1690. Twomile Creek near La Sal, Utah.

Location. --Lat 38°21', long 109°07', in sec.24, T.28 S., R.25 E., just downstream from Pole Springs Canyon, 2 miles upstream from mouth, and 8½ miles northeast of La 3a1.

Drainage area. -- 21.9 sq mi.

Gage. -- Recording. Altitude of gage is 7,840 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 57 cfs.

Bankfull stage .-- 6 ft.

Remarks. -- Two diversions for irrigation of hay meadows above station. One diversion above station exports water to West Paradox Creek basin. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 1, 1945	3.07	96	1949 1950	Apr. 24, 1949 Apr. 7, 1950	2.95 2.59	82 43
1346 1347 1348	Apr. 16, 1946 May 3, 1947 Apr. 18, 1948	2.14 2.39 2.75	€.7 24 61	1951	May 29, 1951	1.99	2.6

1695. Dolores River at Bedrock, Colo.

<u>Location</u>.--Lat 38°18'30", long 108°53'05", in SW_u^1 sec.20, T.47 N., R.18 W., at highway bridge 2,000 ft southeast of Bedrock and 4 miles upstream from West Paradox Creek.

Drainage area. -- 1,910 sq mi, approximately.

Gage .-- Nonrecording. Altitude of gage is 4,940 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 3,600 cfs.

Remarks.--Diversions for irrigation of about 25,000 acres affect peak flows substantially. Only annual peaks are shown.

		1	Peak stages a	und disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918 1919 1920	May 18, 1918 May 28, 1919 May 23, 1920	4.45 5.16 8.6	1,690 2,3 4 0 4,040	1921 1922	May 7, 1921 May 1, 1922	8.1 8.3	4,090 5,460

1700. Buckeye Reservoir Outlet near Paradox, Colo.

Location. --Lat 38°26', long 109°03', in sec.11, T.48 N., R.20 W., 700 ft down-stream from Buckeye Reservoir and $6\frac{1}{2}$ miles northwest of Paradox.

Gage.~-Recording and Parshall flume. Altitude of gage is 7,550 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 45 cfs.

Remarks.--Flow consists entirely of water diverted from Deep and Geyser Creeks in Roc Creek basin and regulated by Buckeye Reservoir (capacity, 3,000 acreft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 30, 1946	0.94	14	1950	June 4, 1950	1.72	39
1947	May 13, 1947	1.90	43	1			
1948	May 12,25-27,1948		45	1951	May 13, 1951	1.05	16
1949	June 24-26,1949	2.31	59				

1705. West Paradox Creek near Paradox, Colo.

Location. -- Lat 38°23'00", long 108°59'45", in NN \(\frac{1}{4}\)SW\(\frac{1}{4}\) sec.29, T.48 N., R.19 W., on left bank at La Sal National Forest boundary, 2 miles northwest of Paradox.

Drainage area. -- 25 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 5,590 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 90 cfs.

Bankfull stage .-- 7 ft.

Remarks.--Diversions from Geyser and Deep Creeks in Roc Creek basin are stored in Buckeye Reservoir (appacity, 3,000 acre-ft) and released down West Taradox Creek for irrigation below station. One diversion above station for irrigation of 50 acres below station. One diversion imports water from Twomile Creek to West Paradox Creek below Buckeye Reservoir. Regulation and diversions substantially affect peak flows. Only annual peaks are shown.

Peak stages and discharges of West Paradox Creek near Paradox, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 1, 1945	3,15	102	1949 1950	Apr. 24, 1949 Apr. 7, 1950	3.60 2.58	182 41
1946	Sept.12, 1946	3.21	101	i	,		
1947	May 16, 1947	2.70	60	1951	May 15, 1951	2.15	18
1948	Sept.27, 1948	5.96	678	1952	Apr. 18, 1952	4.15	273

1710. West Paradox Creek near Bedrock, Colo.

Location. --Lat 38°19'45", long 108°52'15", in $SE_{\psi}^{1}NE_{\psi}^{1}$ sec.17, T.47 N., R.18 W., 1 mile upstream from mouth and $1\frac{1}{2}$ miles northeast of Bedrock.

Drainage area. -- 55 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 4,940 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements relow 45 cfs and extended to 102 cfs on basis of a weir computation.

Bankfull stage .-- 6 ft.

Remarks.--Natural flow of stream affected by water imported from Roc Creek basin through Buckeye Reservoir, diversions for irrigation of about 3,000 acres and return flow from irrigated areas. Regulation and diversions affect peak flows autstantially. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 27, 1945	4.29	-	1950	Oct. 19, 1949	4.95	52
1946 1947 1948 1949	Aug. 22, 1946 Aug. 23, 1947 Sept.27, 1948 Aug. 8, 1949	4.00 3.18 5.40 5.92	16 102 151	1951 1952	Nov. 19, 1950 Jan. 8, 1951 Apr. 17, 1952	5.14 5.97	19 - 54

1715. San Miguel River at Fall Creek, Colo. (Published as "at Seymour " 1896)

Location. -- Lat 38°00', long 108°01', in sec.7, T.43 N., R.10 W., at highway bridge at Fall Creek station on Rio Grande Southern Railroad, 200 ft upstream from Fall Creek.

Drainage area. -- 172 sq mi.

Gage .-- Nonrecording. Altitude of gage is 7,460 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 850 cfs.

Remarks.--Practically no diversions for irrigation above station. Some regulation by Trout Lake and Middle Reservoir (combined capacity, 2,500 acre-ft). Diversion and regulation do not substantially affect peak flows. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	May 27, 1896	5.0	1,240	1898	June 23, 1898	5.1	1,370
1897	June 16, 1897	4.8	1,070	1899	June 10, 14, 1899	4.1	1,080

1720. Fall Creek near Fall Creek, Colo.

Location.--Lat 37°58', long 108°01', in sec.24, T.43 N., R.11 W., on left bank 2.7 miles upstream from mouth and 2.8 miles south of Fall Creek.

Drainage area .-- 33.5 sq mi.

<u>Gage.</u>--Recording. At datum 2.00 ft higher prior to Aug. 25, 1949. Datum of gage is 7,928.79 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 290 cfs and extended above on basis of slope-area measurement at 1,390 cfs.

Remarks.--Slight regulation by Sylvan Lake Reservoir (capacity, 230 acre-ft).

One diversion exports water above station to Beaver and Saltado Creek basins for irrigation of about 2,000 acres. Diversions for irrigation of about 200 acres above station. Diversions and regulation do not affect peak flows substantially. Base for partial-duration series, 125 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 13, 1942 May 26, 1942	1.35 1.51	168 384	1950	Mar. 29, 1950	3.08	185
	May 31, 1942 June 7, 1942	1.33	213 213	1951	May 27, 1951	2.43	97
	June 18, 1942	1.45	245	1952	May 4, 1952 June 8, 1952	2.76 3.28	155 254
1943	May 1, 1943 May 4, 1943	1.19 1.31	152 237	ļ	June 15, 1952 July 6, 1952	3.20	- 151
	June 2, 1943 June 11, 1943	1.40 1.25	270 152	1953	May 28, 1953	3.14	146
	June 21, 1943 Aug. 28, 1943	1.18 1.57	136 468		June 14, 1953	3,08	133
1944	May 14, 1944	2.36	476	1954	May 22, 1954	2.67	72
	May 23, 1944 June 11, 1944	1.49 1.46	198 200	1955	June 8, 1955	2.98	126
	June 26, 1944	1.43	192	1956	June 1, 1956 June 9, 1956	4.36	166
1945	June 15, 1945	1.18	123	1957	May 4, 1957	6.19	1,390
1946	June 6, 1946	1.18	128		June 4, 1957 June 27, 1957	4.14 4.10	298 315
1947	May 3, 1947 June 7, 1947 Aug. 22, 1947	1.23 1.20 1.21	138 132 134		July 27, 1957 Aug. 31, 1957	3.90 3.60	241 1 4 0
1948	Apr. 21, 1948 May 7, 1948	1.22	139 128	1958	Apr. 22, 1958 May 7, 1958 May 28, 1958	3.42 3.60 3.68	135 195 254
	May 19, 1948 June 2, 1948	1.55 1.41	250 195		June 6, 1958	3.70	260
1949	June 11, 1948 June 18, 1949	1.27	157 456	1959	May 15, 1959	2.97	63

1721. Leopard Creek at Noel, Colo.

<u>Location</u>.--Lat 38°06'10", long 107°55'10", in $SE_u^1SW_u^1$ sec.36, T.45 N., R.10 W., on right bank 10 ft downstream from abandoned railroad, 0.6 mile west of Noel, and 2 miles upstream from Dead Horse Canyon.

Drainage area .-- 9.11 sq mi.

Gage .-- Recording. Altitude of gage is 8,700 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 73 cfs.

Remarks.--One diversion above station to Dallas Creek drainage and small diversions for irrigation of hay meadows above station do not materially affect peak flows. Peaks are primarily from snowmelt. Base for partial-duration series, 15 cfs.

Peak stages and discharges of Leopard Creek at Noel, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	Apr. 12, 1956	2.87	20	1959	Apr. 23, 1959	2.90	• 21
1957	Apr. 21, 1957 May 4, 1957 July 29, 1957 Aug. 31, 1957	2.88 3.26 3.00 3.10	24 61 28 37	1960	Apr. 10, 1960 Apr. 18, 1960 July 31, 1960	3.47 3.20 2.77	72 43 16
1958	Apr. 22, 1958 May 4, 1958 May 30, 1958	3.58 3.58 2.97	80 85 27	1961	Apr. 22, 1961 Apr. 30, 1961 July 31, 1961	3.27 3.98 3.20	46 100 43
1959	Apr. 6, 1959	2.78	16	1962	Apr. 17, 1962	3.33	55

1725. San Miguel River near Placerville, Colo.

<u>Location</u>.--Lat 38°02'05", long 108°07'15", in $NW_u^1SW_u^1$ sec.30, T.44 N., R.11 W., on right bank 0.7 mile downstream from Specie Creek and 4 miles northwest of Placerville.

Drainage area. -- 308 sq mi.

Gage.--Nonrecording prior to Apr. 25, 1930; recording thereafter. At site 3.3 miles downstream at different datum Jan. 1 to Dec. 31, 1909. At site 3.2 miles upstream at different datums Aug. 27, 1910, to Nov. 30, 1912, and Apr. 25, 1930, to Sept. 30, 1934. At site 0.7 mile upstream at datum 40.64 ft higher Apr. 1, 1942, to Oct. 21, 1958. Datum of gage is 7,055.80 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 1,500 cfs at site used 1942 to 1958 and below 1,300 cfs at present site.

Bankfull stage .-- 6 ft.

Remarks.--Diversions for irrigation of about 3,700 acres above station. One small ditch exports water from Leopard Creek to Uncompange River basin. Slight regulation by Lake Hope and Trout Lake of Western Colorado Power Co. (combined capacity, 5,040 acre-ft). Diversions and regulation do not substantially affect peak flows. Records for 1930-33 furnished by State engineer of Colorado. Base for partial-duration series, 900 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Sept. 5, 1909	-	10,000	1947	June 17, 1947	2.71	1,070
1912	Oct. 5, 1911	5,20	2,380		June 21, 1947 July 7, 1947 July 22, 1947	2.89 2.85 2.65	1,190 1,160 1,020
1930	June 13, 1930	4.00	1,710		,		1
1931	June 30, 1931	2.76	715	1948	Apr. 21, 1948 Apr. 29, 1948 May 7, 1948	3.30 3.40 3.51	1,540 1,610 1,150
1932	May 21, 1932 June 25, 1932	3.55 3.80	1,120 1,270		May 19, 1948	3.88	1,350
1933	June 1, 1933	3.9	1,470	1949	June 18, 1949	4.69	2,370
1000	June 15, 1933	3.65	1,280	1950	June 17, 1950	2,53	864
1934	May 10, 1934	2.62	656	1951	May 28, June 17,	2.36	734
1942	May 27, June 7, 1942	4.40	1,460	1952	1951 May 5, 1952 May 15, 1952	2.86 2.76	1,080 988
1943	June 23, 1943	2.70	900		June 9, 1952 July 6, 1952	3.62	1,710 1,400
1944	May 14, 1944 June 25, 1944	5.10 3.36	3,060 1,520	1953	May 28, 1953 June 13, 1953	2.70	1,040
1945	May 3, 1945 June 14, 1945	3.23 2.92	1,430 1,210	1954	May 22, 1954	2.04	600
1946	June 11, 1946	2.93	1,220	1955	June 8, 1955 June 21, 1955	2.95 2.68	1,140 932
1947	May 6, 1947 June 9, 1947	2.52 3.08	934 1,330	1956	May 31, 1956	2.58	-

Peak stages and discharges of San Miguel River near Placerville, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	June 4, 1956	-	980	1960	Apr. 10, 1960 June 4, 1960	5.49 5.22	1,720 1,440
1957	June 6, 1957 June 20, 1957	3.35 3.40	1,560 1,600		June 17, 1960	5.38	1,640
	June 29, 1957 July 26, 1957	4.17 3.72	2,350 1,820	1961	Apr. 22, 1961 Apr. 29, 1961	4.75 5.18	925 1,350
	Aug. 31, 1957	2.84	1,030		May 28, 1961 June 12, 1961	5.22 5.17	1,340 1,280
1958	Apr. 22, 1958 May 30, 1958 June 7, 1958	3.75 3.85	1,850 2,180 2,080	1962	Apr. 17, 1962 May 10, 1962	4.78 4.76	952 916
1959	June 3, 1959	4.96	1,120		June 14, 1962 June 30, 1962	4.92 4.88	1,030 1,020

1730. Beaver Creek near Norwood, Colo.

 $\frac{\text{Location.--Lat }37^\circ58^\prime, \text{ long }108^\circ11^\prime, \text{ in sec.28, T.43 N., R.12 W., on left bank }\frac{1}{550\text{ ft upstream from Goat Creek and 13 miles southeast of Norwood.}}$

Drainage area. -- 35.2 sq mi.

Gage.--Recording. At datum 2.00 ft higher prior to Oct. 1, 1948. Datum of gage is 8,008.81 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation .-- Defined by current-meter measurements below 370 cfs.

Remarks.--Gurley ditch diverts water above station to Gurley Reservoir (capacity, 8,800 acre-ft since September 1948 and 3,200 acre-ft prior to September 1948) for irrigation of about 12,000 acres in Naturita Creek basin. Diversion probably affects peak flows substantially. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942 1943 1944 1945	May 27, 1942 Apr. 30, 1943 May 23, 1944 May 10, 1945	2.16 2.76 2.13	480 278 576 356	1952 1953 1954 1955	June 9, 1952 May 28, 1953 Apr. 9, 1954 May 8, 1955	5.67 3.98 3.45 4.08	750 168 44 189
1946 1947 1948 1949 1950	Apr. 21, 1946 May 5, 1947 May 19, 1948 June 18, 1949 Apr. 23, 1950	1.54 2.26 2.65 5.00 3.05	195 401 492 615 178	1956 1957 1958 1959 1960	May 20, 1956 June 4, 1957 May 7, 1958 May 14, 1959 Apr. 10, 1960	3.85 5.11 5.15 4.11 4.60	116 534 550 132 219
1951	Dec. 17, 1950 May 27, 1951	2.62	- 60	1961	May 2, 1961	4.66	189

1735. Horsefly Creek near Sams, Colo.

<u>Location.</u>--Lat $38\,^{\circ}12^{\circ}$, long $108\,^{\circ}03^{\circ}$, in $100\,^{\circ}108\,^{\circ}$ sec. 35, T.46 N., R.11 W., 30 ft downstream from highway bridge, at boundary of Uncompangre National Forest, and 8 miles northwest of Sams.

Drainage area .-- 23.3 sq mi.

Gage .-- Recording. Altitude of gage is 8.330 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 500 cfs.

Bankfull stage .-- 3 ft.

Remarks.--Many small diversions for irrigation of a few hundred acres of hay meadows above station. Regulation and diversions probably do not affect peak flows substantially. Base for partial-duration series, 280 cfs.

Peak stages and discharges of Horsefly Creek near Sams, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 18, 1943	3,95	278	1948	Apr. 22, 1948 Apr. 29, 1948	4.66 4.98	506 632
1944	May 12, 1944	5,43	1,030	1949	Apr. 23, 1949	4.26	388
1945	May 2, 1945	5.35	980	1950	Apr. 13, 1950	3.69	278
1946	Apr. 14, 1946	4.18	319	1951	May 5, 1951	1.96	16
1947	Apr. 20, 1947	4.18	319	1551	, 0, 1001	1.30	

1740. San Miguel River near Nucla, Colo.

<u>Location</u>.--Lat 38°15', long 108°24', in NE $_{1}^{\perp}$ sec.10, T.46 N., R.14 W., on right bank 0.4 mile upstream from highway bridge, three-quarters of a mile upstream from Cottonwood Creek, and $8\frac{1}{2}$ miles east of Nucla.

Drainage area. -- 660 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 5,800 ft (from topographic map).

 $\underline{\text{Stage-discharge relation.--}}\text{Defined by current-meter measurements below 2,500 cfs.}$

Remarks. --Slight regulation by Lake Hope and Trout Lake of Western Colorado Power Co. (combined capacity, 5,040 acre-ft). Natural flow of stream also affected by water from Beaver Creek to Naturita Creek drainage for irrigation of about 12,000 acres, diversions for irrigation of about 5,000 acres above station, and diversion by Colorado Cooperative Canal 4 miles upstream for irrigation below. Peak flows are not materially affected by regulation and diversions. Base for partial-duration series, 1,200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 22, 1954	-	a500	1958	May 30, 1958 June 7, 1958	6.68 6.64	2,600 2,510
1955	Apr. 25, 1955	6.56		l	Julie 1, 1000	0.01	2,020
1956	June 5, 1956	5.36	905	1959	June 9, 1959	5.39	898
	,		Į.	1960	Apr. 10, 1960	7.49	3,650
1957	Apr. 17, 1957	6.28	2,410	Į.	June 4, 1960	5.75	1,270
	May 3, 1957 May 21, 1957	6.57 5.95	2,160 1,420	jj	June 18, 1960	5.80	1,360
	June 6, 1957	6.90	2,600	1961	Apr. 22, 1961	6.67	2,320
	June 29, 1957	6.64	2,530	<u>i</u>]	Apr. 29, 1961	6.69	2,330
	July 27, 1957	6.72	2,270	H	May 28, 1961	5.82	1,270
	Aug. 31, 1957	5.91	1,340]]	_ ′	J	1
				1962	Apr. 17, 1962	7.00	2,760
1958	Apr. 22, 1958 May 4, 1958	7.80 6.84	3,810 2,680		May 10, 1962	5.94	1,300

a Maximum daily.

1745. Cottonwood Creek near Nucla, Colo.

Location.--Lat 38°16', long 108°22', in sec.1, T.46 N., R.14 W., on right bank 10 ft from State Highway 90, half a mile upstream from North Fork, and 10 miles east of Nucla.

Drainage area. -- 43 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,080 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 200 cfs.

Bankfull stage .-- 6 ft.

Remarks. -- Diversions for irrigation of about 100 acres above station. Diversions do not substantially affect peak flows. Base for partial-duration series, 40 cfs.

	Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1942	May 9, 1942	2.55	76	1947	Aug. 29, 1947	2.24	35		
1943	Apr. 15, 1943 May 5, 1943 Aug. 19, 1943	2.78 2.22 2.33	102 77 8 4	1948	Apr. 9, 1948 Apr. 16, 1948 Apr. 22, 1948	2.74 4.37 3.42	89 321 175		
1944	May 1, 1944 May 12, 1944	2.78 4.18	96 2 44	1949	Apr. 12, 1949 Apr. 22, 1949 June 23, 1949	2.36 3.21 2.35	.46 146 57		
1945	Apr. 21, 1945 May 1, 1945 Aug. 8, 1945	3.20 4.48 3.89	126 276 201	1950	Aug. 8, 1949 Apr. 7, 1950	2.79	108		
1946	Aug. 23, 1946	3.60	169	1200	Apr. 13, 1950 Apr. 18, 1950	2.58 3.04	70 125		
1947	Mar. 22, 1947	4.12		1951	May 5, 1951	2,20	32		

1750, Naturita Creek near Norwood, Colo.

<u>Location</u>.--Lat $37^{\circ}58^{\circ}$, long $108^{\circ}19^{\circ}$, in SE_{π}^{\perp} sec.20, T.43 N., R.13 W., 500 ft downstream from confluence of Middle and West Naturita Creeks and 11 miles south of Norwood.

Drainage area .-- 27.7 sq mi.

Gage.--Recording. At datum 1.00 ft higher prior to May 5, 1942. Datum of gage is 7,601.12 ft above mean sea level (Bureau of Reclamation banch mark).

Stage-discharge relation. -- Defined by current-meter measurements below 200 cfs and extended to 850 cfs on basis of slope-area measurement at gage height 4.80 ft.

Bankfull stage. -- 41 ft.

Remarks.--Many small diversions above station for irrigation of a few hundred acres above and below station, and one diversion above station for irrigation of a few hundred acres in Dry Creek basin. Diversions do not substantially affect peak flows. Base for partial-duration series, 210 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height year (cfs) year (cfs) (feet) (feet) 13, 1941 25, 1941 2.79 July 24, 1945 Aug. 11, 1945 5.19 1941 Мау 326 1945 943 May 3.98 550 4.80 850 May 27, 1942 205 1942 2.54 1946 Aug. 19, 1946 3.60 490 Aug. 22, 1946 4.39 727 224 2.65 Aug. 9, 1943 Aug. 15, 1943 1943 1947 Aug. 21, 1947 2.95 323 3.20 312 Apr. 30, 1944 May 16, 1944 266 oct. 14, 1947 3.05 334 1944 3.14 1948 Apr. 17, 1948 May 6, 1948 3.44 3.36 337 443 May 3.40 432 1945 July 20, 1945 2.77 242

Peak stages and discharges of Naturita Creek near Norwood, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 12, 1949 July 24, 1949	2.57 3.01	211 323	1951	Aug. 3, 1951	3.49	430
	Aug. 8, 1949	3.79	547	1952	Apr. 14, 1952	2.54	194
1950	July 17, 1950	1.88	91				

1755. San Miguel River at Naturita, Colo.

Location. --Lat 38°13'10", long 108°34'00", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.46 N., R.15 W., on left bank 20 ft downstream from bridge on State Highway 97 in Naturita and 1.2 miles downstream from Naturita Creek.

Drainage area. -- 1,080 sq mi.

<u>Gage</u>.--Nonrecording Apr. 26, 1918, to Sept. 2, 1926, at different datum; recording Sept. 3, 1926, to Sept. 30, 1929, at different datum; nonrecording Oct. 1, 1940, to Dec. 9, 1941, at same site and datum; recording thereafter. Datum of gage is 5,392.85 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined}$ by current-meter measurements below 3,800~cfs .

Remarks. -- Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 22,000 acres above station and about 4,000 acres below station. Diversions and regulation probably do not substantially affect peak flows. Records for 1921-29 furnished by State engineer of Colorado; those for period May 1 to Sept. 30, 1940, furnished by Bureau of Reclamation. Base for partial-duration series, 1,760 cfs.

			Team Stages				
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 23, 1918	3.8	2,200	1945	Apr. 23, 1945 May 4, 1945	5.91 7.68	2,710 4,530
1919	Apr. 22, 1919	4.0	2,100				İ
1920	May 22, 1920	6.0	4,300	1946	Aug. 24, 1946	4.50	1,550
1921	May 4, 1921	7.5	6,000	1947	Aug. 30, 1947 Sept. 6, 1947	5.65 6.62	2,540 3,520
1922	May 8, 1922	4.85	2,760	1948	Oct. 13, 1947	5.04	2,000
1923	May 27, 1923	3.90	1,760		Apr. 21, 1948 Apr. 29, 1948 May 20, 1948	7.08 6.72 5.47	4,140 3,740 2,470
1924	Apr. 23, 1924	5.9	4,120	1949	Apr. 25, 1949	5.16	2,470
1925	Sept.19, 1925	3.8	1,670	1343	June 19, 1949 June 23, 1949	6.35 6.68	3,580 3,960
1926	June 6, 1926	4.2	1,790		Aug. 9, 1949	5,15	2,310
1927	Apr. 25, 1927 June 28, 1927	4.33 6.40	1,890 3,920	1950	Apr. 9, 1950	3.65	1,140
	Aug. 4, 1927 Sept.10, 1927	4.69 4.56	2,180 2,080	1951	Aug. 3, 1951	3.64	1,130
	Sept.13, 1927	4.43	1,970	1952	Apr. 18, 1952 May 5, 1952	5.62 5.00	2,780 2,160
1928	May 2, 1928 June 1, 1928	4.40	1,890		June 11, 1952 July 6, 1952	4.85 4.86	2,010 2,020
1929	Apr. 17, 1929 May 10, 1929	5.78 4.28	3,370 1,820	1953	June 13, 1953	5.00	1,820
1041	,			1954	oct. 23, 1953	3.55	800
1941	May 4, 1941	8.40	6,520	1955	Apr. 26, 1955	6.37	3,000
1942	Apr. 6, 1942 Apr. 15, 1942 Apr. 23, 1942	6.22 9.80 9.50	3,290 7,100 6,770	1956	June 5, 1956	-	950
	May 10, 1942 May 27, 1942	7.18 6.09	4,250 3,160	1957	Apr. 18, 1957 May 4, 1957 June 6, 1957	5.75 6.35 6.20	2,800 3,120 3,220
1943	July 30, 1943 Aug. 24, 1943	7.10 8.09	4,110 5,090		June 29, 1957 July 27, 1957 Aug. 31, 1957	5.75 6.06 5.45	2,850 3,330 2,560
1944	May 13, 1944 June 21, 1944	8.84 4.98	5,910 1,810	1958	Apr. 19, 1958	8.50	5,880

Peak stages and discharges of San Miguel River at Naturita, Colo. -- Continued

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	May 7, 1958 May 30, 1958 June 7, 1958	6.47 - -	3,510 a3,000 a2,900	1961	Apr. 23, 1961 Apr. 29, 1961	5.62 5.57	2,670 2,620
1959	June 9, 1959	3.74	956	1962	Apr. 18, 1962	6,00	3,180
1960	Apr. 10, 1960	6.98	4,540				

a About.

1765. Tabeguache Creek near Nucla, Colo.

<u>Location</u>.--Lat 38°22', long 108°20', in SE_{4}^{1} sec.31, T.48 N., R.13 W., on right bank 15 ft downstream from bridge, 1 mile downstream from headgate of Glencoe ditch, and 13 miles northeast of Nucla.

Drainage area. -- 20.7 sq mi.

Gage. -- Recording. Altitude of gage is 8,010 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 170 cfs.

Remarks.--Glencoe ditch diverts water above station for irrigation of a few hundred acres in a nearby basin. Diversion probably affects some peak flows substantially. Base for partial-duration series, 110 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 5, 1946	2.90	114	1950	Apr. 21, 1950 May 3, 1950	3.62 3.33	220 148
1947	Apr. 27, 1947	3.05	126	1951	May 12, 1951	3,30	140
1948	Apr. 22, 1948 Apr. 30, 1948	3.42 3.45	189 194 .		May 26, 1951	3.22	124
	May 7, 1948 May 19, 1948	3.44 3.42	192 189	1952	Apr. 27, 1952 May 5, 1952 May 15, 1952	3.68 4.10 3.61	185 264 171
1949	Apr. 26, 1949 May 3, 1949	3.16 3.12	190 183		May 27, 1952	3.28	115
	May 15, 1949 May 28, 1949	3.83 2.83	303 137	1953	May 18, 1953	3.17	114

1770. San Miguel River at Uravan, Colo.

Location. --Lat 38°21'25", long 108°42'40", in $SW_{\frac{1}{4}}^{\frac{1}{4}}NE_{\frac{1}{4}}^{\frac{1}{4}}$ sec. 2, T.47 N., R.17 W., on right bank 20 ft downstream from bridge on State Highway 141, 300 ft downstream from Tabeguache Creek, and $1_{\frac{1}{4}}^{\frac{1}{4}}$ miles southeast of Uravan.

Drainage area. -- 1,550 sq mi, approximately.

Stage-discharge relation.--Defined by current-meter measurements below 3,800 cfs at former site and below 2,300 cfs at present site.

Remarks.--Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 28,000 acres above station, and return flow from irrigated areas. Peak flows are not materially affected by regulations and diversions. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of San Miguel River at Uravan, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Feb. 17, 1955 Apr. 26, 1955	a8.70 8.50	3,000	1958	May 7, 1958 May 30, 1958 June 7, 1958	8.88	4,130 c3,100 c3,000
1956	Aug. 15, 1956	8.91	3,490	1959	Aug. 4, 1959	6.58	1,750
1957	Apr. 18, 1957 May 5, 1957 June 6, 1957	8.33 8.86 9.25	2,810 3,370 3,820	1960	Mar. 8, 1960 Apr. 11, 1960	7.80 9.08	2,570 4,210
	June 21-29,1957 July 27, 1957 Aug. 6, 1957 Aug. 30, 1957	8.85 7.56 10.78	(b) 3,100 2,240 5,530	1961	Apr. 23, 1961 Apr. 30, 1961	7.08 7.15	2,050 2,120
1958	Apr. 19, 1958	11.75	6,690	1962	Apr. 18, 1962	7.83	3,260

1775. Taylor Creek near Gateway, Colo.

Location. -- Lat 38°31', long 109°07', in sec.24, T.26 S., R.25 E., in Utah, on left bank at downstream side of county road bridge, a quarter of a mile downstream from South Taylor Creek, and 12 miles southwest of Gateway.

Drainage area. -- 12 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ At site 770 ft downstream at datum 6.00 ft lower prior to Aug. 31, 1949. Altitude of gage is 8,120 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 227 cfs.

Bankfull stage .-- 6 ft.

Remarks .-- No diversion above station. Base for partial-duration series, 40 cfs.

		:	Peak stages a	nd disch	arges		
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 6, 1945 Aug. 27, 1945	5.72 1.99	413 134	1955	Apr. 16, 1955	3.43	67
1946	Apr. 15, 1946	1.25	40	1956	Mar. 27, 1956 Aug. 1, 1956	a2.72 2.67	13
1947	Apr. 17, 1947	1.39	50	1957	Apr. 17, 1957	3.12 3.33	48
1948	Apr. 18, 1948	3,40	555		May 5, 1957 May 19, 1957 June 10, 1957	3.18 3.37	74 54 78
1949	Apr. 25, 1949 June 18, 1949	3.02 1.96	403 86		July 19, 1957	4.18	201
1950	Apr. 7, 1950 Apr. 21, 1950	3.53 3.30	83 59	1958	Apr. 18, 1958 May 6, 1958 May 11, 1958	4.40 3.53 3.64	217 91 108
1951	Aug. 1, 1951	2.83	19	1959	July 31, 1959	3.97	-
1952	Apr. 25, 1952 May 3, 1952 July 26, 1952	4.25 3.63 3.28	212 114 67	1960	Aug. 3, 1959 Apr. 10, 1960	3.66	48 111
1953	Apr. 26, 1953	2.86	21	1961	Apr. 4, 1961 Apr. 17, 1961 July 31, 1961	3.65 3.37 3.55	115 76 112
1954	April 1954 Aug. I2, 1954	3.27 3.32	70 65	1962	Apr. 15, 1962	4.25	218

a Backwater from ice.

a Ice jam.
b Unknown; probably exceeded base discharge.
c About.

1780. Deep Creek near Paradox, Colo.

Location. --Lat 38°30', long 109°09', in SE¹/₄ sec.34, T.26 S., R.25 E., in Utah, on right bank a quarter of a mile downstream from diversion to Buckeye Reservoir and 13 miles northwest of Paradox.

Drainage area . -- Not determined.

 $\underline{\text{Gage}}$.--Recording. Datum of gage is 8,659.59 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation .-- Defined by current-meter measurements below 15 cfs.

Remarks.--Most of flow is diverted a quarter of a mile above station to Buckeye Reservoir in West Paradox Creek basin. Diversions substantially affect peak flows. Only annual peaks are shown.

Peak stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 3, 1945	1.26	5.3	1950	Dec. 9, 1949	-	4.2
1946 1947 1948 1949	May 4, 1946 June 11, 1947 May 19, 1948 June 18, 1949	1.13 1.18 1.39 1.52	4.6 9.1 22 29	1951 1952 1953	Nov. 19, 1950 June 15, 1952 Apr. 24, 1953	1.28 1.67 1.37	2.3 19 7.0

1790. Roc Creek near Uranium, Colo.

Location.--Lat 38°26'05", long 108°55'20", in $NW_{1}^{1}NW_{1}^{1}$ sec.12, T.48 N., R.19 W., at La Sal National Forest boundary, 1_{4}^{1} miles west of Uranium.

Drainage area .-- 69.5 sq mi.

Gage.--Recording. At site a quarter of a mile downstream at different datum
prior to July 26, 1946. Altitude of gage is 5,200 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 240 cfs and extended above on basis of slope-area measurement at 885 cfs.

Remarks, -- Most of flow of Geyser and Deep Creeks in Roc Creek tasin is diverted to Buckeye Reservoir in West Paradox Creek basin; release from Buckeye Reservoir is approximately equal to flow diverted from Roc Creek basin. Diversions substantially affect peak flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 6, 1945	4.69	146	1949 1950	Apr. 24, 1949 Apr. 6, 1950	3.85 2.48	488 164
1946	May 10, 1946	4.24	102				
1947	Aug. 22, 1947	2.27	145	1951	Aug. 20, 1951	1.21	18
1948	Apr. 18, 1948	3.93	508	1952	July 10, 1952	5.55	885

1795. Dolores River at Gateway, Colo.

Location. --Lat 38°40'55", long 108°58'50", in $SW^{\frac{1}{4}}$ sec.15, T.51 N., R.19 W., 500 ft downstream from bridge on State Highway 141, 0.3 mile west of Gateway, 0.3 mile downstream from West Creek, and 8 miles upstream from Colorado-Utah State line.

Drainage area. -- 4,350 sq mi, approximately.

Gage.--Recording. At site 300 ft upstream prior to Oct. 10, 1941. Datum of gage is 4,547.76 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined}$ by current-meter measurements below $9,\!100$ cfs.

Remarks. -- Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 37,000 acres in Montezuma Valley in the San Juan River basin, diversions for irrigation of about 35,000 acres above station, and return flow from irrigated areas. Diversion and regulation substantially affect peak flows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)							
1937 1938 1939 1940	Apr. 17, 1937 Apr. 25, 1938 Apr. 5, 1939 Apr. 22, 1940	10.28 11.65 6.46 6.75	10,200 13,000 4,000 4,590	1946 1947 1948 1949 1950	Aug. 12, 1946 May 15, 1947 Apr. 18, 1948 June 20, 1949 Apr. 9, 1950	3.71 5.02 7.36 7.42 5.81	2,510 5,040 9,520 9,360 5,600							
1941 1942 1943 1944 1945	May 14, 1941 Apr. 15, 1942 Apr. 7, 1943 May 16, 1944 May 9, 1945	12.85 10.70 6.56 6.94 8.30	15,400 13,700 6,190 12,300 10,200	1951 1952 1953 1954	May 29, 1951 May 6, 1952 June 14, 1953 Oct. 23, 1953	2.92 8.28 4.06 4.17	1,830 10,500 3,110 3,260							

1800. Dolores River near Cisco, Utah.

Location.--Lat 38°47'50", long 109°11'40", in $S\Psi_{\frac{1}{4}}^{\frac{1}{4}}SE_{\frac{1}{4}}^{\frac{1}{4}}$ sec.18, T.23 S., R.25 E., on left bank 9 miles upstream from mouth, $13\frac{1}{2}$ miles downstream from Colorado-Utah State line, and 14 miles southeast of Cisco.

Drainage area. -- 4,580 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 4,165 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Storage reservoirs and diversions for irrigation above station materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 5,000 cfs.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1951	May 28, 1951	3.70	2,140	1957	June 7, 1957 June 29, 1957	6.99 5.57	9,500 5,950
1952	May 6, 1952 June 11, 1952	7.67 5.83	11,100 6,170		Aug. 31, 1957	5.42	5,620
1953	June 14, 1953	4.33	3,060	1958	Apr. 21, 1958 May 8, 1958 June 7, 1958	9.84 7.02 5.83	17,400 8,390 5,450
1954	Oct. 23, 1953	4.45	3,220	1959	1	4.38	,
1955	May 10, 1955	4.49	3,690		· ,		3,300
1956	June 2, 1956	3.77	2,470	1960	Apr. 11, 1960	5.90	6,160
1957	Apr. 19, 1957	5.42	5,620	1961	May 3, 1961	4.76	3,510
	May 8, 1957	6.92	9,480	1962	Apr. 21, 1962	6.10	6,760

1805. Colorado River near Cisco, Utah

Location.--Lat 38°48'40", long 109°17'35", in $NW_{\overline{u}}^1NW_{\overline{u}}^1$ sec.17, T.23 S., R.24 E., on left bank 1 mile downstream from Dolores River, 11 miles south of Cisco, 97 miles upstream from Green River, and 235 miles upstream from San Juan River.

Drainage area. -- 24,100 sq mi, approximately.

Gage.--Nonrecording at site 31 miles downstream at bridge at Moab at datum 3,937.73 ft above mean sea level prior to Nov. 10, 1914; recording thereafter at present site at elevation 4,090 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 67,000 cfs; definition good below 40,000 cfs, fair above. Moderate shifting.

Remarks. -- Diversions for irrigation of 546,000 acres; also transmountain diversions. Peak discharges are affected. Base for partial-duration series, 26,000 cfs.

	Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1914	June 3, 1914	21.52	a66,100	1936	Apr. 24, 1936	9.38	27,800		
				1	May 7, 1936	12.6	39,200		
1915	May 21, 1915 June 3, 1915 June 13, 1915 June 21, 1915	9.00 9.68 10.9 10.52	26,900 30,000 35,500 32,300	1937	May 18, 1936 May 17, 1937 May 31, 1937	12.27 13.00 10.30	38,600 40,100 28,500		
1916	Apr. 30, 1916 May 11, 1916 June 15, 1916	10.54 13.90 12.71	32,000 47,800 42,100	1938	Apr. 27, 1938 May 2, 1938 May 18, 1938 June 5, 1938	12.58 13.10 12.85 15.78	39,100 41,400 40,300 53,700		
1917	May 19, 1917 June 19, 1917	16.0 19.7	56,200 76,800		June 23, 1938	14.10	45,900		
100"			74 500	1939	May 24, 1939	9.63	25,400		
1923	May 12, 1923 May 29, 1923 June 18, 1923	11.3 14.1 13.55	34,500 47,500 44,900	1940	May 14, 1940	9.37	25,390		
				1941	May 5, 1941	13.55	44,100		
1924	May 19, 1924 June 16, 1924	11.1 14.9	33,500 51,300		May 15, 1941 May 28, 1941	18.84 12.50	64,400 38,800		
	vanc 10, 1024	17.5	51,500	Į .	June 8, 1941	11.25	33,200		
1925	June 1, 1925 June 23, 1925	9.86 9.75	28,200 28,200		June 21, 1941	11.20	32,400		
1926	May 7, 1926	11,65	36,600	1942	Oct. 14, 1941 Apr. 16, 1942	11.78 12.07	34,300 37,900		
1320	May 27, 1926	15.2	52,400		Apr. 24, 1942	12.40	38,300		
	June 8, 1926	14.2	47,700		May 13, 1942	12.75	39,400		
1007	W 4 1007	11.0	74 000		May 28, 1942	15.91	51,500		
1927	May 4, 1927 May 20, 1927 June 30, 1927 July 5, 1927	11.0 14.48 13.40 10.45	34,000 49,000 44,100 31,900	1943	May 6, 1943 June 3, 1943 June 12, 1943	10.54 12.20 9.88	29,000 36,600 26,500		
	Sept.13, 1927	9.85	33,400				· -		
1000			4= 500	1944	May 17, 1944	16.25	53,600		
1928	May 4, 1928 May 11, 1928	13.58 13.98	45,500 47,300		May 25, 1944 June 12, 1944	12.70 12.54	40,900 38,600		
	June 1, 1928 June 28, 1928	17.32 9.93	65,000 29,000		June 22, 1944	10,95	31,300		
1000	w 05 1000		F0 000	1945	May 13, 1945	11.72	33,400		
1929	May 27, 1929 June 11, 1929	16.7 15.55	59,600 54,100		May 29, 1945 June 16, 1945	10.25 10.65	28,200 29,100		
	Aug. 3, 1929	10.10	30,100		June 25, 1945	10.20	27,900		
1930	June 1, 1930 June 14, 1930	12.8 11.45	41,000 35,400	1946	June 10, 1946 June 19, 1946	10.01 9.97	27,100 27,800		
1931	June 9, 1931	7.32	18,700	1947	May 10, 1947 June 10, 1947	12.10 12.12	35,700 36,800		
1932	May 24, 1932 June 27, 1932	14.60 11.43	50,100 34,700		June 22, 1947	12.85	40,300		
	June 21, 1932	11.43	J4, 100	1948	Apr. 23, 1948	10.10	29,300		
1933	May 23, 1933	9.88	29,200	1	May 2, 1948	10.71	32,200		
	June 3, 1933	14.80	50,600		May 23, 1948	15.83	51,900		
	June 13, 1933	13.38	43,900	1949	May 5, 1949	9.55	26,300		
1934	May 13, 1934	7.40	17,300	10.0	May 17, 1949 May 30, 1949	9.53 10.05	26,200 27,600		
1935	June 16, 1935	16.0	54,600		June 20, 1949	16.18	53,800		
a Anr	nual peak only.		•				-		

Peak stages and discharges of Colorado River near Cisco, Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 4, 1950	9.33	24,400	1957	June 9, 1957	18.92 17.53	64,200 57,800
1951	May 30, 1951 June 23, 1951	10.81 10.65	29,700 29,800		July 1, 1957 July 20, 1957	10.14	27,700
1952	Apr. 29, 1952 May 7, 1952 June 9, 1952	12.62 16.69 17.18	39,100 55,200 57,200	1958	Apr. 23, 1958 May 13, 1958 May 31, 1958 June 8, 1958	10.36 12.31 15.74 15.35	30,300 35,100 49,700 49,100
1953	May 30, 1953 June 15, 1953	11.40 13.01	33,300 38,900	1959	June 11, 1959	8.53	22,300
1954	May 23, 1954	6.11	12,900	1960	June 5, 1960	9.62	26,100
1955	June 10, 1955	7.62	18,100	1961	May 31, 1961	8.48	21,100
1956	June 4, 1956	10.80	30,900	1962	Apr. 22, 1962 May 14, 1962 June 15, 1962	11.23 14.03 10.85	33,500 44,400 31,700
1957	May 10, 1957	12.27	36,000		July 2, 1962	9.75	26,900

TRIBUTARIES BETWEEN DOLORES RIVER AND GREEN RIVER

1810. Onion Creek near Moab, Utah

 $\frac{\text{Location}}{\text{mile upstream from mouth and 15 miles northeast of Moab.}}$

Drainage area. -- 18.8 sq mi.

 $\frac{\text{Gage.--Recording gage and concrete control at site 1 mile upstream at altitude}}{4,160 \text{ ft (from topographic map) prior to 1961; crest-stage gage thereafter.}}$ Altitude of gage is 4,120 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 27 cfs and extended above on basis of slope-area measurement at 2,100 cfs.

Remarks. -- Diversions above station for irrigation do not materially affect peak flows. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	July 8, 1950 Sept.19, 1950	2.72 2.52	546 399	1954	Aug. 13, 1954 Sept. 2, 1954 Sept. 24, 1954	3.63 2.46 2.40	1,270 358 351
1951	Aug. 5, 1951 Aug. 29, 1951	2.72 5.10	546 2,100	1955	Nov. 12, 1954 May 22, 1955	2.70 3.60	457 1,020
1952	June 2, 1952	2.12	167		Aug. 3, 1955 Aug. 25, 1955	3.23 3.45	742 950
1953	July 31, 1953 Aug. 1, 1953	2.80 3.20	614 902	1961	Aug. 29, 1961	3.75	al,300
1954	Oct. 20, 1953 July 25, 1954	2.36 2.51	331 428	1962	June 30, 1962	3.16	a510

a Annual peak only.

1820. Castle Creek above diversions, near Moab, Utah

<u>Location</u>.--Lat 38°35'30", long 109°15'55", in NE $\frac{1}{4}$ sec.33, T.25 S., R.24 E., on left bank 1 mile east of La Sal National Forest boundary and 15 miles east of Moab.

Drainage area .-- 7.58 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 7,070 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 18 cfs.

Remarks. -- Base for partial-duration series, 5.0 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Apr. 10, 1951	0.89	3.2	1957	June 6, 1957	1.72	19
1952	June 7, 1952 July 23, 1952	1.20	23 6.6	1958	May 30, 1958	1.47	18
	, ,	1	}	1959	Sept. 5, 1959	1.23	1.0
1953	Apr. 26, 1953 June 15, 1953 Aug. 1, 1953	.96 1.00 1.15	5.5 7.2 20	1960	June 10, 1960	1.32	2.5
1954	Apr. 20, 1954	1.17	4.8	1961	June 3, 1961 Aug. 25, 1961	1.36 1.41	4.0
1955	June 12, 1955 Aug. 13, 1955	1.16 1.17	9.6 7.6	1962	May 14, 1962	1.44	8.4

1825. Castle Creek near Moab, Utah

<u>Location</u>.--Lat 38°40'45", long 109°26'55", in NE $\frac{1}{4}$ sec.35, T.24 S., R.22 E., on right bank at downstream side of highway bridge, half a mile upstream from mouth and $8\frac{3}{4}$ miles northeast of Moab.

Drainage area. -- 53.1 sq mi.

Gage. -- Recording. Altitude of gage is 4,060 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 15 cfs and extended to 11,000 cfs on basis of slope-area measurements at gage heights 4.45, 10.35, and 16.9 ft.

Remarks. -- Several small diversions above station for irrigation do not materially affect peak flows. Base for partial-duration series, 100 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage leight (feet)	Discharge (cfs)
1950	Sept.19, 1950	5.08	539	1954	Aug. 13, 1954	16.9	11,000
1951	Aug. 3, 1951 Aug. 29, 1951	4.45 10.35	384 4,360	1955	Mar. 4, 1955 Aug. 25, 1955	4.15 5.26	303 552
1952	Aug. 21, 1952	3.25	174	1957	Aug. 5, 1957	11.60	5,000
1953	July 30, 1953 Aug. 27, 1953	3.75 3.17	230 167	1958	Nov. 4, 1957	7.23	a187

a Annual peak only.

1830. Courthouse Wash near Moab, Utah

<u>Location</u>.--Lat 38°36'45", long 109°34'45", in SE $\frac{1}{4}$ sec.22, T.25 S., R.21 E., on left bank three-quarters of a mile upstream from mouth and 3 miles northwest of Moab.

Drainage area. -- 162 sq mi.

Gage .-- Recording. Altitude of gage is 3,980 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 500 cfs and extended above on basis of slope-area measurement at 12,300 cfs.

Remarks. -- Base for partial-duration series, 700 cfs.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Oct. 19, 1949 Sept.19, 1950	2.60 3.30	870 1,590	1954	Aug. 13, 1954	4.00	2,420
	Sept.19, 1950 Sept.19, 1950	2.50 3.50	821 1,810	1955	Nov. 13, 1954	3.40	1,700
1951	Aug. 29, 1951	2.60	902	1957	Aug. 5, 1957 Aug. 6, 1957 Aug. 7, 1957	9.38 5.65 2.70	12,300 4,920 987
1952	Jan. 18, 1952	2.25	630		Aug. 20, 1957 Aug. 22, 1957	2.70	987 1.480
1953	July 31, 1953 Aug. 1, 1953 Aug. 27, 1953	2.65 4.50 4.53	944 3,100 3,140		Aug. 30, 1957	2.36	715

1840. Mill Creek near Moab, Utah

Location. --Lat 38°33'40", long 109°30'50", in NW1NE1 sec.8, T.26 S., R.22 E., on right bank half a mile downstream from North Fork, 1.5 miles southeast of Moab, and 3.5 miles upstream from mouth.

Drainage area. -- 74.9 sq mi (76 sq mi prior to Mar. 16, 1962).

Gage.--Nonrecording prior to Apr. 28, 1918; recording thereafter. At site 0.4 mile upstream at various datums prior to Mar. 16, 1962. Recording and sharp-crested weir since Mar. 16, 1962. Altitude of gage is 4,240 ft (from topographic map).

Stage-discharge relation.--1914-17: Defined by current-meter measurements below 43 cfs and extended by logarithmic plotting.
1948-62: Defined by current-meter measurements below 120 cfs and by slope-area measurements at gage heights 5.26 and 8.24 ft.

Remarks.--No diversion above station. Record of peaks above 250 cfs complete since 1950; only annual peaks are shown prior thereto. Base for partial-duration series, 250 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Iischarge (cfs)
1915	Apr. 29, 1915	2.20	220	1954	June 26, 1954 Aug. 13, 1954	4.54 8.62	308 2.080
1916 1917	Aug. 12, 1916 Oct. 7, 1916	2.30 3.50	235 450		Sept.23, 1954	5,50	529
1949	July 9, 1949	3.44	163	1955	Nov. 12, 1954	3.78	163
1950	Oct. 19, 1949	4.07	255	1956	Aug. 15, 1956	4.38	257
				1957	Aug. 5, 1957	11.1 5.88	4,450 656
1951	Aug. 4, 1951 Aug. 29, 1951	5,26 8.24	472 2,940		Aug. 20, 1957 Aug. 30, 1957	5.55	542
1952	July 29, 1952	3.80	202	1958	Oct. 12, 1957	4.72 4.64	287 266
1953	July 30, 1953	9.03	2,890		Oct. 13, 1957 Oct. 21, 1957	4.74	292
	Aug. 1, 1953 Aug. 21, 1953	9.81	3,840 5,110		Sept.12, 1958	6.81	1,060
		ĺ	1	1959	Aug. 19, 1959	4.84	228
1954	Oct. 20, 1953	5.22	472	ll .	1		l

Peak stages and discharges of Mill Creek near Moab, Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1960	July 31, 1960	4.40	212	1961	Sept.18, 1961	9.4	2,660
1961	May 5, 1961 Aug. 5, 1961 Aug. 26, 1961 Sept. 9, 1961	4.75 7.00 11.6 7.50	330 1,140 5,100 1,400	1962	Oct. 8, 1961 June 29, 1962 June 30, 1962 Sept.28, 1962	6.2 3.16 6.01 2.95	77 <u>4</u> 363 3,010 264

1845. Pack Creek at M4 Ranch, near Moab, Utah

Location.--Lat 38°26'10", long 109°21'15", in SE_4^1 sec.23, T.27 S., R.23 E., on left bank half a mile upstream from M4 Ranch and 14 miles southeast of Moab.

Drainage area. -- 15.8 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 6,140 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{and\ extended\ above\ on\ basis\ of\ slope-area\ measurement\ at\ 1,200\ cfs.}$

Remarks. -- Small diversion for irrigation above station does not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 10 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Oct. 8, 1954 May 7, 1955 July 26, 1955 Aug. 5, 1955	2.19 1.53 9.02 1.74	42 10 1,200 17	1957	July 17, 1957 July 19, 1957 July 23, 1957	1.67 1.57 2.04	13 10 31
1956	Aug. 5, 1955 July 31, 1956	1.74	10	1958	Apr. 21, 1958 May 24, 1958	1.67 2.36	12 47
1957	June 10, 1957 July 12, 1957	3.05 1.72	118 14	1 9 59	Sept.16, 1959	1.28	4.8

1850. Pack Creek near Moab, Utah

<u>Location</u>.--Lat 38°32'25", long 109°30'00", in $SW_{4}^{\frac{1}{4}}$ sec.16, T.26 S., R.22 E., on left bank 3.5 miles southeast of Moab.

Drainage area .-- 57.4 sq mi.

Gage .-- Recording gage and concrete control.

 $\frac{\text{Stage-discharge relation.}\text{--Defined by current-meter measurements below 60 cfs}}{\text{and extended above on basis of slope-area measurement at 510 cfs.}}$

 $\underline{\text{Remarks.}}\text{--}\text{Several diversions}$ for irrigation above station do not materially affect peak flows. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Oct. 8, 1954	4.05	510	1957 1958	Aug. 30, 1957 Oct. 21, 1957	3.62 2.67	390 151
1956	Aug. 15, 1956	2.28	177	1959	Feb. 12, 1959	1.58	6.2

1855. Hatch Wash near La Sal, Utah

Location. --Lat 38°14'35", long 109°26'25", in SW $_4^1$ sec.30, T.29 S., R.23 E., on right bank 10 miles southwest of La Sal.

Drainage area. -- 378 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 5,500 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 280 cfs and extended above on basis of velocity-area studies and slope-area measurement at 3,210 cfs.

Remarks .-- Base of partial-duration series, 80 cfs.

Peak stages and discharges	Peak	stages	and	discharges
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Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Sept.20, 1950	3.25	728	1957	Aug. 7, 1957 Aug. 20, 1957	2.58 2.30	331 178
1951	Aug. 20, 1951 Aug. 21, 1951 Aug. 22, 1951	2,26 1,87 2,52	217 103 323		Aug. 28, 1957 Aug. 30, 1957	2.52 3.08	297 610
	Aug. 30, 1951	3.00	574	1958	Oct. 11, 1957 Oct. 19, 1957	2.14 2.28	120 183
1952	Mar. 30, 1952 Apr. 2, 1952 Aug. 28, 1952	3.78 3.12 3.24	1,100 646 722		Oct. 21, 1957 Nov. 3, 1957 Feb. 23, 1958	2.77 2.82 2.14	479 497 134
1953	July 31, 1953	2.08	157		Sept.24, 1958	2.29	168
1954	Sept. 8, 1954	1.68	61	1959	Oct. 25, 1958 Aug. 4, 1959 Sept.15, 1959	2.38 6.43 2.40	215 3,210 226
1955	Oct. 8, 1954 March 1955 Aug. 27, 1955	2.35 3.00 2.22	251 57 4 139	1960	Mar. 8, 1960 Mar. 22, 1960	2.33 2.95	163 462
1956	May 23, 1956 July 31, 1956	2.35 2.44	20 4 25 3	1961	June 10, 1960 Mar. 15, 1961 Sept. 9, 1961	2.14 2.28 2.13	139 90
1957	Feb. 18, 1957 July 18, 1957 July 27, 1957	2.22 3.11 2.87	120 640 497	1962	Oct. 9, 1961	2.40	215

1860. Indian Creek near Monticello, Utah

Location .--Lat 37°50'40", long 109°31'05", in SW $\frac{1}{4}$ sec.4, T.34 S., R.22 E. (unsurveyed), on left bank 1 mile northwest of Indian Creek guard station and 10 miles west of Monticello.

Drainage area. -- 4.70 sq mi.

Gage. -- Recording. Altitude of gage is 8,700 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{and\ extended\ above\ by\ logarithmic\ plotting.}$

Remarks.--A tunnel diverts water about 1 mile above station (diversion began June 1952) to San Juan River basin for domestic use and irrigation in the vicinity of Blanding. Only annual peaks are shown.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1950	June 1, 1950	-	14	1954 1955	May 22, 1954 Aug. 6, 1955	1.58 2.74	19 122		
1951 1952 1953	Aug. 29, 1951 June 3, 1952 May 24, 1953	1.74 2.57 1.40	20 108 12	1956 1957	Aug. 15, 1956 June 11, 1957	1.67	17 62		

1865. Indian Creek above Cottonwood Creek, near Monticello, Utah

<u>Location</u>.--Lat 37°58'30", long 109°31'05", in SE^1_4 sec.21, T.32 S., R.22 E., on right bank 8 miles upstream from Cottonwood Creek and 12 miles northwest of Monticello.

Drainage area. -- 31.2 sq mi.

Gage .-- Recording. Altitude of gage is 6,290 ft (by barometer).

Stage-discharge relation. --Defined by current-meter measurements below 82 cfs and extended to 582 cfs on basis of slope-area measurements at gage heights 5.55 and 8.15 ft.

Remarks. -- Indian Creek tunnel diverts water above station to San Juan River basin. Diversions do not materially affect peak flow. Peaks are principally from snowmelt. Base for partial-duration series, 60 cfs.

Peak stages and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Sept.19, 1950	5.58	90	1957	June 10, 1957	6.07	138
1951	July 27, 1951	6.31	179	1958	May 12, 1958 May 23, 1958	5.84 5.89	88 108
1952	July 10, 1952	7.15	293		June 5, 1958	5.72	84
1953	July 30, 1953	5.37	63	1959	Nov. 12, 1958	5.09	18
1954	Sept.25, 1954	5.22	53	1960	Aug. 23, 1960	5.71	62
1955	July 20, 1955	8.15	582	1961	July 29, 1961	5.58	55
1956	July 28, 1956	5.70	107	1962	Sept.24, 1962	5.90	86

1870. Cottonwood Creek near Monticello, Utah

<u>Location</u>.--Lat 38°03'45", long 109°34'25", in SE_u^1 sec.23, T.31 S., R.21 E., on left bank 1 mile upstream from mouth and 18 miles northwest of Monticello.

Drainage area. -- 115 sq mi.

 $\underline{\text{Gage.--}}$ Recording prior to 1961; crest-stage gage thereafter. Bedrock control capped with concrete. Altitude of gage is 5,340 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 39 cfs and extended above on basis of slope-area measurement at 1,520 cfs.

Remarks. -- Peaks are principally from snowmelt. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Oct. 19, 1949	-	30	1956	May 22, 1956 July 1, 1956	1.88	236 169
1951	Aug. 20, 1951 Aug. 29, 1951	- 4.80	(a) 1,520		Aug. 1, 1956 Aug. 14, 1956 Aug. 15, 1956	1.68 1.68 1.66	162 162 155
1952	Jan. 18, 1952	1.35	112		Aug. 16, 1956	1.64	148
1953	July 10, 1953 Aug. 27, 1953	6.00 1.35	2,140 139	1957	July 17, 1957 July 26, 1957 July 31, 1957	3.18 1.54 1.58	766 115 128
1954	Sept.12, 1954	1.13	78		Aug. 6, 1957 Aug. 20, 1957	1.65	152 180
19 5 5	Aug. 3, 1955 Aug. 5, 1955 Aug. 6, 1955	1.75 1.76 1.58	142 147 102		Aug. 26, 1957 Aug. 29, 1957 Aug. 30, 1957	1.62 1.59 1.65	141 131 152
	Aug. 7, 1955 Aug. 12, 1955 Aug. 16, 1955	1.71 1.74 1.83	136 1 44 167	1961 1962	July 31, 1961 Sept.20, 1962	5.81 2.02	b1,680 b2 9 0

a Unknown; exceeded base discharge. b Annual peak only.

1875. Indian Creek above Harts Draw, near Monticello, Utah

Location.--Lat 38°08'25", long 109°37'25", in NW_{π}^{1} sec.33, T.30 S., R.21 E., 5 miles upstream from Harts Draw and 24 miles northwest of Monticello.

Drainage area. -- 258 sq mi.

Gage. -- Recording. Altitude of gage is 4,920 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 2,900 cfs.

 $\frac{\text{Remarks.}\text{--}\text{Diversions for irrigation of 600 acres above station do not materially affect peak flows. Only annual peaks are shown.}$

	Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Oct. 19, 1949	6.10	526	1954 1955	Sept.25, 1954 Aug. 16, 1955	7.70 8.00	1,420 1,690
1951 1952 1953	Aug. 22, 1951 July 11, 1952 July 10, 1953	7.24 5.00 8.20	1,070 237 1,890	1956 1957	Aug. 1, 1956 Aug. 30, 1957	7.30 9.21	1,110 3,120

GREEN RIVER BASIN

1885. Green River at Warren Bridge, near Daniel, Wyo.

Location.--Lat 43°01'00", long 110°07'20", in sec.8, T.35 N., R.111 W., on left bank 100 ft upstream from bridge on U.S. Highwaya 187 and 189, 3 miles upstream from Beaver Creek, and 12 miles north of Daniel.

Drainage area. -- 468 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 7,468.09 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below $4\,,\!4\,00$ cfs.

Remarks.--Adjudicated diversions above station for irrigation of about 7,000 acres above and below station (the 1949 Bureau of the Census map of irrigated acreage shows about 2,000 acres above station). Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 1,800 cfs. Only annual peaks are shown subsequent to 1952.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge
1932	June 26, 1932 July 13, 1932	5.08 4.06	3,510 2,130	1941	June 25, 1941	4.43	2,490
1933	June 15, 1933	4.86	2,920	1942	May 27, 1942 June 11, 1942 June 27, 1942	4.33 4.72 4.17	2,360 2,890 2,160
1934	May 21, 1934	3.14	1,110		July 10, 1942	4.53	2,620
1935	June 15, 1935	5.03	3,120	1943	May 31, 1943 June 28, 1943	4.54 4.90	2,760 3,260
1936	May 16, 1936 June 3, 1936 June 17, 1936	4.52 4.83 4.48	2,610 3,080 2,590	1944	June 3, 1944 June 28, 1944 July 4, 1944	4.18 4.73 4.54	2,250 3,020 2,760
1937	May 29, 1937 June 24, 1937 July 10, 1937	4.04 4.52 3.90	2,010 2,650 1,810	1945	June 25, 1945 July 11, 1945	4.27 4.23	2,320 2,260
1938	June 9, 1938 June 24, 1938	4.42 4.57	2,470 2,630	1946	June 11, 1946	4.11	2,100
1939	June 1, 1939	3.87	1,890	1947	May 11, 1947 June 10, 1947 June 22, 1947	4.49 3.98 4.39	2,630 1,840 2,350
1940	June 17, 1940	3.80	1,720		July 10, 1947	4.36	2,290
1941	May 27, 1941	4.28	2,300	1948	June 10, 1948	4.69	2,910

Peak stages and discharges of Green River at Warren Bridge near Dariel, Wyo .-- Cont.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 19, 1949 May 30, 1949 June 13, 1949	4.17 4.00 4.59	2,180 1,960 2,770	1952	May 5, 1952 June 9, 1952	4.16 4.86	2,020 2,960
	July 7, 1949	3.87	1,800	1953 1954	June 16, 1953 June 29, 1954	5.38 5.49	4,080 4,460
1950	June 2, 1950 June 8, 1950	4.33 4.65	2,340 2,770	1955	June 25, 1955	4.25	2,280
	June 23, 1950 July 4, 1950	4.83 4.93	3,040 3,180	1956 1957 1958	June 3, 1956 June 7, 1957 May 27, 1958	5.35 5.27 4.39	4,030 3,720 2,430
1951	May 30, 1951 June 19, 1951 July 7, 1951	4.89 4.93 4.37	3,120 3,180 2,270	1959 1960	June 17, 1959 June 5, 1960	5.56 3.90	4,420 1,730
	July 22, 1951 Aug. 4, 1951	4.47 4.17	2,300 1,910	1961 1962	May 30, 1961 June 28, 1962	4.08 4.97	2,020 3,350

1890. Beaver Creek near Daniel, Wyo.

Location. --Lat 43°00'20", long 110°08'30", in sec.18, T.35 N., R.111 W., on left bank at Hanson Ranch, half a mile downstream from forks, 1 mile upstream from mouth, 2 miles southwest of Warren Bridge, and 11 miles northwest of Daniel.

Drainage area. -- 141 sq mi.

Gage .-- Recording. Altitude of gage is 7,440 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Remarks. -- Adjudicated diversions above station for irrigation of about 10,700 acres above and below station (the 1949 Bureau of the Census map for irrigated acreage shows about 2,000 acres irrigated above station). Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
19 3 9 19 4 0	Apr. 8, 1939 Apr. 17, 1940	5.32 4.85	179 135	1947 1948 1949	May 2, 1947 Apr. 30, 1948 Apr. 25, 1949	7.09 5.85 6.92	686 34 6 689
1941 1942	May 3, 1941 Apr. 12, 1942	5.45 6.3	289 468	1950	May 16, 1950	8.34	1,540
1943 1944 1945	May 2, 1943 Apr. 10, 1944 June 8, 1945	8.23 7.32 4.32	1,260 860 139	1951 1952 1953 1954	May 12, 1951 May 3, 1952 May 6, 1953 Apr. 28, 1954	7.07 7.84 5.58 6.62	726 1,080 348 605
1946	May 10, 1946	5.78	297			ļ	L

1895. Horse Creek at Sherman ranger station, Wyo.

<u>Location</u>.--Lat 42°56'40", long 110°23'20", in SW $\frac{1}{4}$ sec.6, T.34 N., R.113 W., on left bank half a mile east of Sherman ranger station, three-quarters of a mile downstream from Spring Creek, $5\frac{1}{2}$ miles upstream from South Horse Creek, and 17 miles southwest of Daniel.

Drainage area. -- 43.0 sq mi.

Gage.--Recording. Datum of gage is 7,770.71 ft above mean sea level, datum of 1929.

Stage-discharge relation .-- Defined by current-meter measurements below 880 cfs.

 $\frac{Remarks}{Base}$.-No diversions above station. Peak flows are principally from snowmelt.

Peak stages and discharges of Horse Creek at Sherman ranger station, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 14, 1955 May 22, 1955 May 30, 1955 June 7, 1955	4.60 5.23 4.66 5.55	315 624 336 850	1958 1959	May 27, 1958 May 16, 1959 June 16, 1959	5.82 4.55 6.20	879 282 1,780
1956	Apr. 24, 1956 May 10, 1956 May 26, 1956 June 1, 1956 June 11, 1956	4.31 4.59 6.24 6.43 6.18	233 329 1,580 1,860 1,490	1960 1961	May 13, 1960 June 3, 1960 May 25, 1961 Sept. 2, 1961	4.99 5.76 5.76 4.34	445 882 1,050 204
1957	May 10, 1957 June 7, 1957	4.63 6.35	338 1,260	1962	May 9, 1962 June 13, 1962	5.51 5.82	67 4 889

1900. Horse Creek near Daniel, Wyo.

Location.--Lat 42°55'40", long 110°12'00", in SE $\frac{1}{4}$ sec.10, T.34 N., R.112 W., on left bank 8 miles northwest of Daniel.

Drainage area .-- 124 sq mi.

Gage.--Recording. At site 350 ft downstream at datum 0.27 ft higher prior to Nov. 30, 1948. Datum of gage is 7,350.15 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 940 cfs.

Bankfull stage .-- 4 ft.

Remarks.--Adjudicated diversions above station for irrigation of 16,300 acres lying above and below station (the 1949 Bureau of the Census map of irrigated acreage shows about 4,500 acres irrigated above station). Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	lischarge (cfs)
1932	June 16, 1932	2.23	754	1944	June 10, 1944	1.98	466
1933	June 15, 1933	2.31	798	1945	June 24, 1945	2.19	550
1934	May 8, 1934	1.44	206	li	i	ĺ	l
1935	June 13, 1935	2.85	1,260	1946	June 6, 1946	2.40	575
	-	1		1947	May 11, 1947	2.58	744
1936	May 31, 1936	3.53	1,670	1948	May 29, 1948	2.46	652
1937	May 28, 1937	2.16	635	1949	May 29, 1949	3.23	671
1938	June 5, 1938	2.41	820	1950	June 17, 1950	3.88	828
1939	May 30, 1939	1.87	393				1
1940	May 29, 1940	1.68	298	1951	May 29, 1951	4.42	1,230
				1952	June 7, 1952	3.57	750
1941	May 27, 1941	1.90	470	1953	June 14, 1953	3.98	884
1942	June 8, 1942	2.19	662	1954	May 22, 1954	3.97	872
1943	May 31, 1943	2.75	1,020	1201	1.2, 22, 1001	3.07]

1905. Horse Creek at Daniel, Wyo.

<u>Location</u>.--Lat 42°51'10", long 110°04'10", in $SW_{\frac{1}{4}}^{1}$ sec.2, T.33 f., R.111 W., at highway bridge three-quarters of a mile south of Daniel.

Drainage area .-- 173 sq mi.

Gage .-- Nonrecording. Altitude of gage is 7,185 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,300 cfs.

Remarks.--No tributary between station and mouth. Adjudicated diversions above station for irrigation of about 18,900 acres above and below station. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	May 25, 1913	5.0	1,260	1916	June 18, 1916	4.76	1,120
1914	June 3, 1914	4.7	1,100	1917	June 25, 1917	4.9	1,260
1915	June 3, 1915	2.42	281	1918	June 16, 1918	5.7	1,530

1910. Green River near Daniel, Wyo.

Location.--Lat 42°47', long 109°58', in sec.5, T.32 N., R.110 W., at former highway bridge 6 miles southeast of Daniel.

Drainage area .-- 932 sq mi.

Gage. -- Nonrecording. Altitude of gage is 7,040 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 7,200 cfs.

Remarks.--Diversions above station for irrigation of about 60,000 acres above and below station. Natural regulation by lakes. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage reight (feet)	Discharge (cfs)
1913	May 31, 1913	5.4	5,000	1923	June 14, 1923	4.75	3,530
1914	June 5, 1914	5.1	4,400	1924	May 18, 1924	3.82	1,790
1915	July 16, 1915	3.85	2,180	1925	July 3, 1925	4.85	3,470
1916	June 20, 1916	5.3	4,810	1926	June 9, 1926	3.9	1,930
1917	June 26, 1917	5.5	4,810	1927	June 30, 1927	5.66	5,480
1918	June 16, 1918	7.0	8,750	1928	May 29, 1928	5.25	4,670
1919	June 2, 1919	4.4	2,620	1929	May 26, 1929	4.05	2,160
1920	June 14, 1920	4.7	3,170	1930	June 13, 1930	4.15	2,470
1921	June 15, 1921	5.8	5,710	1931	June 18, 1931	3.40	1,410
1922	June 15, 1922	5.1	4,010	1932	June 27, 1932	4.75	3,780

1915. Cottonwood Creek near Daniel, Wyo.

Location: --Lat 42°46'30", long 110°09'20", in sec.11, T.32 N., R.112 W., cn right bank 1½ miles downstream from confluence of North and South Cottchwood Creeks and 7 miles southwest of Daniel.

Drainage area. -- 202 sq mi.

Gage. -- Recording. Altitude of gage is 7,230 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 870 cfs.

Remarks.--Adjudicated diversions above station for irrigation of about 18,000 acres above and below station (the 1949 Bureau of the Census map of irrigated acreage shows irrigation of about 5,000 acres above station). Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak s	tages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 31, 1939	5.96	248	1947	June 13, 1947	6.55	468
1940	May 30, 1940	5.66	141	1948	June 23, 1948	6.53	458
		l	_	1949	May 19, 1949	6.54	478
1941	June 9, 1941	6.45	450	1950	June 3, 1950	6.58	632
1942	June 16, 1942	5.88	217	H			
1943	Apr. 21, 1943	6.42	560	1951	May 30, 1951	6.66	954
1944	June 27, 1944	5.81	214	1952	Apr. 27, 1952	6.63	689
1945	June 27, 1945	5.91	246	1953	June 19, 1953	6.22	393
	ł	ł		1954	May 22, 1954	6.33	459
1946	June 19, 1946	6.75	648	l1			

1965. Pine Creek above Fremont Lake, Wyo.

Location.--Lat 43°01'50", long 109°46'10", in $S^{\frac{1}{2}}$ sec.5, T.35 N., R.108 W., on right bank half a mile upstream from Fremont Lake, half a mile downstream from Fremont Creek, and 12 miles northeast of Pinedale.

Drainage area .-- 75.8 sq mi.

Gage. -- Recording. Altitude of gage is 7,540 ft (from topographic map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below $1,800$ cfs.}$

 $\frac{\text{Remarks.--No}}{\text{Base}} \text{ for partial-duration series, 800 cfs.}$

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 22, 1955 June 23, 1955	5.24 5.76	978 1,390	1958	May 29, 1958	5.86	1,380
1956	May 26, 1956	5.70	1,300	1959	June 16, 1959	7.15	2,550
1000	June 4, 1956 June 13, 1956	6.00	1,510 1,710	1960	June 4, 1960	5.76	1,340
	June 20, 1956 June 28, 1956	5.41 5.48	1,100 1,150	1961	May 30, 1961	5.68	1,240
				1962	June 27, 1962	6.45	1,880
1957	June 7, 1957 July 1, 1957	6.22 6.21	1,700 1,690		,		

1970. Pine Creek at Fremont Lake Outlet, Wyo. (Published as Pine Creek near Pinedale, 1910-12)

Location. --Lat 42°54', long 109°50', in sec.22, T.34 N., R.109 W., a third of a mile downstream from outlet of Fremont Lake and 2½ miles northeast of Finedale.

Drainage area. -- 114 sq mi.

Gage. -- Nonrecording. Altitude of gage is 7,450 ft.

Stage-discharge relation. -- Defined by current-meter measurements below 2.100 cfs.

Remarks. --Fremont Canal diverts water above station for irrigation of land below station. Regulation above station by Fremont Lake. Records for 1910-12, published herewith, were originally published under station name Pine Creek near Pinedale; as the records for 1910-12 are not equivalent to other records published as "near Pinedale," they are included here with records with which they are equivalent. Regulation and diversion substantially affect peak flows. Only annual peaks are shown.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 24, 1911	4.6	1,620	1917	June 30, July 1, 6-13, 1917	4.2	1,540
1916	July 2, 1916	3.65	1,160	1918	6-13, 1917 June 17, 1918	5.2	2,330

1980. Pine Creek at Pinedale, Wyo.

Location. --Lat 42°52', long 109°52', at north edge of sec.4, T.33 N., R.109 W., 30 ft downstream from bridge on U.S. Highway 187 at Pinedal∈ and 3 miles upstream from mouth.

Drainage area. -- 118 sq mi.

Gage. --Nonrecording prior to May 4, 1926; recording thereafter. At site a quarter of a mile upstream at different datum May 8, 1915, to Aug. 16, 1917. At different datum Aug. 17, 1917, to May 3, 1926. At datum 3.06 ft higher May 4, 1926, to Nov. 11, 1948. Datum of gage is 7,162.34 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 2,000 cfs.

Remarks.--Flow regulated by Fremont Lake (regulated capacity, 20,600 acre-ft).

Adjudicated diversions for irrigation of about 6,000 acres εbove station.

Regulation and diversion substantially affect peak flows. Cnly annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	July 5, 1915	2.85	500	1930	June 22, 1930	3.65	1,080
1916 1917 1918 1919 1920	June 20, 1916 July 1, 1917 June 17, 1918 May 30, 1919 June 16, 1920	4.2 4.1 4.8 3.2 3.15	1,750 1,800 2,170 1,110 1,080	1931 1932 1933 1934 1935	June 9, 1931 June 26, 1932 June 19, 1933 May 23, 1934 June 15, 1935	2.98 4.28 3.95 2.71 3.71	559 1,680 1,350 416 1,210
1921 1922 1923 1924 1925	June 15, 1921 June 23, 1922 June 15, 1923 June 16-21,1924 June 27, 1925	4.0 4.0 3.4 2.7 4.4	1,640 1,500 1,070 475 1,900	1936 1937 1938 1939 1940	June 2, 1936 June 24, 1937 June 26, 1938 June 2, 1939 June 3, 1940	3.60 3.19 3.96 2.64 3.20	1,140 775 1,260 440 782
1926 1927 1928 1929	June 10, 1926 June 28, 1927 May 30, 1928 June 18, 1929	4.57 3.56 3.41	630 2,010 1,150 868	1941 1942 1943 1944	June 23, 1941 June 11, 1942 June 29, 1943 June 28, 1944	3.87 3.86 3.82 3.21	952 964 1,280 1,090

Peak stages and discharges of Pine Creek at Pinedale, Wyo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	July 14, 1945	2.84	812	1950	July 5, 1950	5.72	1,320
1946 1947 1948 1949	June 18, 1946 June 21, 1947 June 4, 1948 June 20, 1949	3.08 3.35 3.35 5.33	944 1,050 1,170 917	1951 1952 1953 1954	July 8, 1951 June 9, 1952 June 21, 1953 June 28, 1954	5.28 5.39 6.08 5.74	923 991 1,710 1,660

1985. Pole Creek below Little Half Moon Lake, near Pinedale, Wyo.

<u>Location</u>.--Lat 42°53¹, long 109°43¹, in sec.26, T.34 N., R.108 W., $1\frac{1}{2}$ miles downstream from Little Half Moon Lake and 7 miles east of Pinedale.

Drainage area .-- 87.5 sq mi.

Gage.--Recording. At site a quarter of a mile upstream at different datum prior to Oct. 27, 1948. Altitude of gage is 7,350 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 1,200 cfs.

Remarks.--Natural regulation by several lakes above station. Adjudicated diversions for irrigation of 490 acres above station. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges Gage Gage Water Discharge Water Discharge height Date Date height vear (cfs) vear (cfs) (feet) (feet) June 18, 1951 June 8, 1952 June 16, 1953 June 2, 1939 May 28, 1940 5.25 1951 6.39 1,140 1939 500 555 1952 6.18 1,040 1940 5.36 1953 6.61 1,270 6.07 6.57 1941 May 28, 1941 761 1954 May May 23, 1954 23, 1955 1,250 June 11, 1942 June 23, 1943 June 28, 1944 June 25, 1945 6.37 6.73 6.01 5.59 1942 851 1955 1,090 1943 June 5, 1956 June 8, 1957 May 25, 1958 June 17, 1959 1,130 1,190 925 1956 6.37 1944 1945 6.11 743 1957 6.61 6.07 6.74 1958 5.78 668 1,300 1946 8, 1946 1959 June June 21, 1947 5, 1960 5.70 754 1947 6.67 958 770 1960 June 24, 1948 18, 1949 1948 May 5.82 892 1961 May 30, 1961 June 21, 1962 5.78 794 1949 May Mav June 18, 1950 914 1962 6.14 995 1950 6.13

1995. Fall Creek near Pinedale, Wyo.

Location. --Lat 42°51', long 109°43', in sec.2, T.33 N., R.108 W., on right bank at McBride Ranch, half a mile downstream from Meadow Creek, 3 miles dcwnstream from Burnt Lake, and 8 miles east of Pinedale.

Drainage area. -- 37.2 sq mi.

 $\frac{\text{Gage.}\text{--Recording.}}{\text{gage is 7,300 ft (by barometer).}}$ At datum 2.00 ft higher prior to Apr. 4. 1942. Altitude of

Stage-discharge relation. -- Defined by current-meter measurements below 450 cfs.

Remarks. -- Practically no diversion above station. Natural regulation by many small lakes above station. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939 1940	June 1, 1939 May 17, 1940	4.91 4.79	198 180	1951 1952 1953	June 17, 1951 June 7, 1952 June 15, 1953	7.76 7.95 8.56	546 502 707
1941 1942 1943	May 27, 1941 June 9, 1942 June 22, 1943	5.40 7.58 7.83	273 317 5 4 6	1954 1955	May 22, 1954 May 22, 1955	7.89 7.34	556 278
1944 1945	June 1, 1944 June 24, 1945	7.32 7.34	352 365	1956 1957 1958	June 4, 1956 June 5, 1957 May 22, 1958	7.78 8.06 7.35	505 611 375
1946 1947 1948	June 7, 1946 June 21, 1947 June 3, 1948	7.38 7.70 7.75	353 480 515	1959 1960	June 17, 1959 June 4, 1960	7.90 7.37	575 302
1949 1950	June 11, 1949 June 14, 1950	7.29 7.73	325 430	1961 1962	May 29, 1961 June 15, 1962	7.41 7.64	310 439

2010. New Fork River near Boulder, Wyo. (Published as New Fork near Boulder prior to 1944)

Location.--Lat 42°45', long 109°44', in sec.9, T.32 N., R.108 W., on left bank 70 ft downstream from county highway bridge, 700 ft upstream from Boulder Creek, and half a mile southwest of Boulder.

Drainage area. -- 552 sq mi.

 $\underline{\text{Gage.}}$ --Nonrecording prior to Sept. 7, 1936; recording thereafter. Altitude of gage is 6,900 ft (by barometer).

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below 5,700 cfs.

Remarks.--Flow partly regulated by Fremont, New Fork, and Willow Lakes (combined capacity, 81,500 acre-ft) and Little Half Moon Lake. Diversions for irrigation of about 27,000 acres above station. Regulation and diversion for irrigation probably substantially affect peak flows. Feaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage he1ght (feet)	Discharge (cfs)
1915	June 27, 1915	3.9	1,100	1939 1940	June 2, 1939 May 29, 1940	4.38	1,460 1,340
1916	June 22, 1916	6.3	3,200				-,
1917	June 1, 1917	-	3,180	1941	May 28, 1941	5.44	2,090
1918	June 17, 1918	8.7	12,300	1942	June 11, 1942	5.68	2,620
1919	May 31, 1919	5.35	2,480	1943	June 28, 1943	6.42	3,400
1920	June 10, 1920	_	2,950	1944	June 28, 1944	6.00	2,720
			1	1945	June 28, 1945	5.48	2,210
1921	June 15, 1921	-	4,740	1]		-
1922	June 23, 1922	6.2	3,420	1946	June 19, 1946	5.64	2,370
1923	June 14, 1923	5.8	2,890	1947	June 22, 1947	6.39	3,340
1924	May 22, 1924	4.48	1,560	1948	June 4, 1948	6.27	3,280
1925	July 2, 1925	6.1	3,200	1949	June 14, 1949	5.36	2,120
	1			1950	July 5, 1950	6.15	3,160
1926	June 10, 1926	4.5	1,450	ll		ľ	
1927	June 30, 1927	7.35	5,320	1951	June 20, 1951	6.27	3,100
1928	May 30, 1928	6.00	3,220	1952	June 9, 1952	6.08	2,860
1929	June 18, 1929	5.25	2,340	1953	June 20, 1953	6.55	3,540
1930	June 13, 1930	5.52	2,700	1954	June 28, 1954	6.76	3,780
	_			1955	June 24, 1955	4.99	1,680
1931	June 9, 1931	3.92	1,030	i i			
1932	June 27, 1932	6.56	4,690	1956	June 6, 1956	6.25	3,140
1933	June 15, 1933	6.15	3,930	1957	June 11, 1957	6.23	2,730
1934	May 23, 1934	3.70	930	1958	May 30, 1958	5.46	1,980
1935	June 15, 1935	6.05	3,740	1959	June 17, 1959	6.32	3,250
				1960	June 10, 1960	4.69	1,470
1936	June 2, 1936	6.35	4,220				
1937	May 30, 1937	4.96	2,100	1961	June 4, 1961	4,25	1,240
1938	June 9, 1938	5.75	3,080	1962	June 28, 1962	5.95	3,180

2020. Boulder Creek below Boulder Lake, near Boulder, Wyo.

Location. --Lat 42°50', long 109°43', in sec.14, T.33 N., R.108 W., on right bank 1 mile downstream from outlet of Boulder Lake and 5 miles north of Boulder.

Drainage area. -- 130 sq mi.

Gage. -- Recording. Altitude of gage is 7,200 ft (by barometer).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below } 2,400 \text{ cfs.}$

Remarks.--Flow partly regulated by Boulder Lake (capacity, 11,000 acre-ft). No diversion above station. Only annual peaks are shown.

Peak stages and discharges of Boulder Creek below Boulder Lake, near Boulder, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Nov. 25, 1938	4.54	1,200	1951	June 18, 1951	5.91	2,450
1940	May 28, 1940	4.21	1,070	1952	June 8, 1952	5.75	2,240
				1953	June 15, 1953	6.12	2,810
1941	May 27, 1941	5.08	1,530	1954	May 22, 1954	5.82	2,300
1942	June 10, 1942	5.48	1,800	1955	May 23, 1955	4.93	1,470
1943	June 22, 1943	5.96	2,440				
1944	June 2, 1944	5,15	1,700	1956	June 3, 1956	5.70	2,180
1945	June 24, 1945	5.63	2,090	1957	June 8, 1957	5.87	2,320
				1958	May 28, 1958	5.27	1,830
1946	June 7, 1946	5.14	1,650	1959	June 16, 1959	5.79	2,340
1947	June 21, 1947	5.74	2,240	1960	June 5, 1960	4.67	1,340
1948	June 3, 1948	5.35	1,880		_		
1949	June 12, 1949	5.10	1,660	1961	May 30, 1961	4.93	1,550
1950	June 17, 1950	5.59	2,100	1962	June 21, 1962	5,15	1,780

2025. Boulder Creek near Boulder, Wyo. (Records published as "near New Fork" 1904)

Location. -- Lat 42°47', long 109°43', in sec.4, T.32 N., R.108 W., 2 miles upstream from mouth and 2 miles northwest of Boulder.

Drainage area. -- 135 sq mi.

Gage.--Nonrecording. At site a quarter of a mile upstream at different datum Apr. 23, 1904, to Apr. 30, 1906. At different datum May 1 to Oct. 31, 1906. Altitude of gage is 7,030 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 2,600 cfs.

Remarks. -- Adjudicated diversions above station for irrigation of about 8,800 acres above and below station. Flow slightly regulated by Boulder Lake. Diversions and regulation do not substantially affect peak flows. Peaks are principally due to snowmelt. Only annual peaks are shown.

Peak stages and discharges

	Total porter and arbeitarben										
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1904 1905	June 16,22,1904 June 9,1905	4.40 4.20	2,060 1,980	1919 1920	May 30, 1919 June 9, 1920	5.17 5.45	1,940 2,160				
1906	June 14, 1906	5.10	2,620	1921 1922	June 12, 1921 June 10, 1922	6.3 5.8	2,760 2,340				
1915	June 3, 1915	3.3	810	1923 1924	June 13, 1923 May 18, 1924	5.7 4.55	2,260 1,480				
1916 1917 1918	June 18, 1916 June 25, 1917 June 14, 1918	5.5 6.1 6.8	2,420 2,710 3,240	1931 1932	June 4, 1931 June 24, 1932	3.44 5.58	779 2,140				

2030. East Fork near Big Sandy, Wyo.

Location.--Lat 42°40', long 109°25', in sec.7, T.31 N., R.105 W., on left bank 1 mile downstream from Jim Creek and 4 miles northeast of Big Sandy.

Drainage area. -- 79.2 sq mi.

Gage. -- Recording. Altitude of gage is 7,800 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended above on basis of slope-area measurement at 1,600 cfs.

 $\frac{\text{Remarks.}\text{--No diversion above station.}}{\text{Base for partial-duration series, 700 efs.}}$

Peak stages and discharges of East Fork near Big Sand, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 5, 1939	5.37	665	1950	June 17, 1950 June 25, 1950	6.88 6.43	1,600 1,290
1940	May 12, 1940	5.38	680		July 2, 1950	6.31	1,210
1941	May 14, 1941 May 18, 1941	5.82 5.90	901 945	1951	May 28, 1951 June 17, 1951	6.68 6.51	1,470 1,350
	May 27, 1941	6.07	1,040		,		-
	June 18, 1941	5.58	765	1952	May 7, 1952 May 14, 1952	5.62 5.61	806 800
1942	May 27, 1942 June 9, 1942	6.73 6.45	1,440 1,270		June 7, 1952	6.72	1,520
1943	May 29, 1943	6.42	1,250	1953	June 14, 1953	7.05	1,720
1010	June 12, 1943 June 21, 1943	5.69 6.51	835	1954	May 22, 1954 June 27, 1954	6.66 5.94	1,430 962
	June 21, 1945	0.51	1,310		June 27, 1334	3,34	302
1944	May 31, 1944	6.21	1,130	1955	May 14, 1955 May 21, 1955	5.48 6.36	740 1,240
	June 16, 1944 June 21, 1944	5.52 5.68	750 830		May 21, 1955 June 9, 1955	6.00	973
	June 27, 1944	5.83	905		June 14, 1955	5.59	750
1945	June 23, 1945	6.31	1,190	1956	May 25, 1956 June 2, 1956	6.48 6.51	1,350 1,370
1946	June 6, 1946	6.27	1,160		June 11, 1956	5.88	984
1947	May 9, 1947	6.43	1,260	1957	June 7, 1957	6.90	1,630
	May 28, 1947 June 9, 1947	5.43 6.44	714 1,260		June 29, 1957	6.42	1,320
	June 20, 1947	5.96	976	1958	May 25, 1958	6.59	1,440
	July 3, 1947	5.43	714	1959	June 10, 1959	5.84	929
1948	May 22, 1948	6.60	1,360		-		
1949	May 15, 1949	5.54	772	1960	May 13, 1960	5.64	852
1-10	May 29, 1949	5.58	794	1961	May 28, 1961	5.50	815
	June 11, 1949 June 19, 1949	5.93 6.64	986 1,390	1962	May 10, 1962	5.66	885
	_			1302	June 3, 1962	5.41	730
1950	June 7, 1950	6.51	1,350		June 13, 1962	5,96	1,100

2035. East Fork at East Fork Canal, Wyo.

 $\frac{\text{Location.--Lat }42\,^\circ\text{4l', long }109\,^\circ\text{28', in sec.10, T.31 N., R.106 W., }300~\text{ft upstream from intake of East Fork Canal and l4 miles southeast of Boulder.}$

Drainage area. -- 106 sq mi.

Gage .-- Nonrecording. Altitude of gage is 7,460 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 830 cfs.

Remarks.--Adjudicated diversions above station for irrigation of about 1,900 acres, most of which are below station. Some natural regulation by many small lakes in headwaters. Diversions and regulation probably do not substantially affect peak flows. Peaks are principally due to snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916 1917	June 16, 1916 June 23,25,1917	4.4 4.6	1,260 1,400	1922 1923	June 10, 1922 May 26, 1923	4.3 4.1	1,180 1,040
1921	June 7,12, 1921	4.3	1,180	1			

2040. Silver Creek near Big Sandy, Wyo.

Location.--Lat 42°45', long 109°31', in sec.17, T.32 N., R.106 W., on right bank at Miller Ranch, 1 mile downstream from South Fork, 8 miles northwest of Big Sandy, and 11 miles east of Boulder.

Drainage area .-- 45.4 sq mi.

Gage .-- Recording. Altitude of gage is 7,500 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 810 cfs and extended above on basis of velocity-area studies.

Remarks.--Adjudicated diversions for irrigation of 120 acres. Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 380 cfs.

Peak	stages	and	discharges

			TCAR DUAGED E	ina arbon	41800		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 5, 1939	5.74	381	1951	May 28, 1951	7.53	1,030
1940	May 10, 1940	5.57	326		June 16, 1951	6.80	745
3043				1952	May 6, 1952	5.91	475
1941	May 18, 1941	6.33	539		May 14, 1952	5.98	493
	May 22, 1941	6.63	611		June 2, 1952	6.55	658
1942	May 26, 1942	7.04	710	1953	June 13, 1953	7.33	952
	June 8, 1942	6.90	676		June 16, 1953	6.63	686
1943	May 30, 1943	6.80	702	1954	May 21, 1954	7.44	996
	June 12, 1943	6.12	533			1	
	June 20, 1943	6.58	645	1955	May 14, 1955	5.78	414
3044				l l	May 20, 1955	6.99	816
1944	May 29, 1944	6.63	628		June 8, 1955	6.28	568
1945	June 23, 1945	6.23	541	1956	May 24, 1956	7.19	896
	1	1		11	June 3, 1956	7.07	848
1947	May 8, 1947	6.57	639	ļ			
	May 22, 1947	5,93	499	1957	June 6, 1957	7.42	994
	May 27, 1947	6.03	521				
	June 9, 1947	6.92	720	1958	May 25, 1958	7.09	898
	June 20, 1947	5.86	483	1.050	7 7. 1050	0.70	
1949	May 15, 1949	5.85	447	1959	June 7, 1959	6.72	758
1949	May 28, 1949	5.86	467	1960	May 12, 1960	6.32	614
	June 19, 1949	5.50	392	1360	May 12, 1900	0.32	614
	oune 15, 1545	3.50	332	1961	May 23, 1961	6.02	521
1950	June 1, 1950	6.42	626	1301	, 20, 1901	1 0.02	1
	June 6, 1950	7.26	924	1962	May 9, 1962	6.21	a566
	June 16, 1950	7.47	1,000		,, 0, 2002		4555

a Annual peak only.

2045. East Fork at Newfork, Wyo. (Published as "at New Fork" in Water-Supply Papers 469 and 618)

<u>Location</u>.--Lat $42\,^\circ42\,^\circ$, long $109\,^\circ43\,^\circ$, in sec.33, T.32 N., R.108 W., a quarter of a mile south of Newfork and 1 mile upstream from mouth.

Drainage area. -- 348 sq mi.

Gage.--Nonrecording. At site a quarter of a mile upstream at different datum Apr. 1, 1905, to Apr. 30, 1906. At datum 0.23 ft lower May 1 to Oct. 31, 1906. At datum 0.50 ft lower May 11, 1915, to Nov. 1, 1924. Altitude of gage is 6,900 ft (estimated on basis of known elevation 0.2 mile away).

Stage-discharge relation. -- Defined by current-meter measurements below 2,900 cfs.

Remarks. -- Adjudicated diversions for irrigation of about 17,000 acres probably do not substantially affect peak flows. Peaks are principally due to snowmelt. Only annual peaks are shown.

Gage Gage Water Discharge Water Discharge Date height Date height vear (cfs) vear (cfs) (feet) (feet) June 5, 1905 June 14, 1906 9, 1921 10, 1922 28, 1927 4.9 5.38 1905 1921 June 6.75 2,550 2,920 1906 1922 2,460 2,390 June 6.1 1923 May 28, 1923 1915 June 2, 1915 4.08 1,060 1924 May 17, 1924 4.85 1,460 June 17, 1916 June 19, 1917 June 11, 1918 5.78 6.7 1916 2,180 16, 1931 22, 1932 1931 3.48 5.82 May 916 1917 2,940 1932 May 2,120 1918 6,8 1920 June 10, 1920

Peak stages and discharges of East Fork at Newfork, Wyo.

2050. New Fork River near Big Piney, Wyo.

2,410

Location.--Lat 42°34', long 109°56', in NE_{u}^{1} sec.22, T.30 N., P.110 W., on right bank 35 ft downstream from old highway bridge, 2 miles upstream from mouth, and 9½ miles northeast of Big Piney.

Drainage area. -- 1,230 sq mi, approximately.

6.13

Gage. -- Recording. Altitude of gage is 6,800 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 6,400 cfs.

Remarks. -- Natural flow of stream affected by storage reservoirs, power developments, diversion for irrigation, and return from irrigated areas. Regulation and diversions do not materially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	June 15, 1955	5.07	3,610	1959	June 18, 1959	6.22	5,700
				1960	June 8, 1960	4.67	2,960
1956	June 5, 1956	6.53	6,060	i '			
1957	June 8, 1957	7.00	6,970	1961	May 31, 1961	4.51	2,720
1958	May 26, 1958	5.70	4,880	1962	June 22, 1962	5.93	5,340

2055. North Piney Creek near Mason, Wyo (Published as "near Marbleton" 1915-16)

 $\underline{Location}$.--Lat 42°39'20", long 110°20'40", in sec.19, T.31 N., R.113 W., on left bank 3 miles west of Mason and 15 miles northwest of Big Piney.

Drainage area. -- 58 sq mi, approximately.

<u>Gage</u>.--Recording. At datum 1.05 ft lower prior to Oct. 12, 1931. Altitude of gage is 7,520 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 540 cfs.

Bankfull stage .-- 4 ft.

Remarks .-- Adjudicated diversions for irrigation of about 1,600 acres probably do not substantially affect peak flows. Only annual peaks are shown.

Peak stages and discharges of North Piney Creek near Mason, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	June 12, 1915	3.15	130	1947	June 21, 1947	3,62	395
1916	June 19, 1916	4.98	613	1948	June 9, 1948	3.53	375
	1			1949	June 13, 1949	3.27	317
1932	June 24, 1932	-	a450	1950	July 4, 1950	4.10	515
1933	June 18, 1933	3.48	366				
1934	May 20, 1934	2.30	142	1951	June 17, 1951	4.27	606
1935	June 14, 1935	3.56	403	1952	June 7, 1952	4.17	576
				1953	June 20, 1953	3.83	399
1936	June 1, 1936	3.90	504	1954	June 27, 1954	3.76	382
1937	June 23, 1937	3.02	288	1955	June 12, 1955	3.07	230
1938	June 7, 1938	3.37	380				
1939	May 31, 1939	3.27	354	1956	June 2, 1956	4.38	619
1940	June 2, 1940	2.69	218	1957	June 30, 1957	3.82	492
				1958	June 8, 1958	3.58	452
1941	June 18, 1941	2.87	245	1959	June 17, 1959	3.63	467
1942	June 10, 1942	3.00	272	1960	June 15, 1960	2.87	265
1943	June 27, 1943	3.90	480				
1944	June 27, 1944	3.08	274	1961	June 10, 1961	2.87	248
1945	June 23, 1945	3.08	279	1962	June 21, 1962	3.53	400
1946	June 11, 1946	3.71	418				

a Estimated maximum daily.

2060. Middle Piney Creek below South Fork, near Big Piney, Wyo.

Location. --Lat 42°36'10", long 110°27'20", in sec.7, T.30 N., R.114 W., on left bank 1 mile downstream from South Fork and 18 miles northwest of Big Piney.

Drainage area. -- 34.3 sq mi.

Gage. -- Recording. Altitude of gage is 7,980 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 240 cfs.

Remarks.--Flow regulated by Middle Piney Lake (usable capacity, 4,200 acre-ft).

Adjudicated diversions for irrigation of about 400 acres. Regulation and diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	June 1, 1940	5.49	49	1947 1948	June 20, 1947 June 11, 1948	6.24	184
1941 1942	June 23, 1941 July 6, 1942	5.83 5.74	91 79	1949	June 18, 1949	5.88 5.87	124 111
1943	June 29, 1943	6.33	254		July 7, 1950	6.40	236
1945	June 9, 1944 July 10, 1945	5.80	104 130	1951 1952	May 28, 1951 June 9, 1952	6.41 6.06	244 170
1946	June 19, 1946	6.10	168	1953 1954	July 10, 1953 June 27, 1954	5.91 5.97	144 155

2070. Middle Piney Creek near Big Piney, Wyo.

Location. -- Lat 42°33'20", long 110°20'40", in sec.30, T.30 N., R.113 W., 12 miles west of Big Piney.

Drainage area. -- 46 sq mi, approximately.

Gage.--Nonrecording. At site 1 mile downstream at different datum May 1, 1914, to Apr. 23, 1916. At datum 0.64 ft higher Apr. 24, 1916, to May 16, 1917, and at datum 0.14 ft higher May 17, 1917, to Nov. 23, 1918. Altitude of gage is 7,500 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 110 cfs.

Remarks.--Adjudicated diversions for irrigation of about 3,000 acres substantially affect peak flows. Peaks are principally from snowmelt. Records for 1914 furnished by State engineer of Wyoming. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	July 8, 1915	1.72	66	1918	June 17, 1918	2,65	282
1916 1917	June 20, 1916 June 24,July 1, 1917	1.50 2.56	134 260	1931 1932	July 1, 1931 June 29, 1932	1.40 2.06	45 157

2080. La Barge Creek near La Barge Meadows ranger station, Wyo.

Location. --Lat 42°30'30", long 110°40'10", in $SE_{\pi}^{\frac{1}{4}}$ sec. 8, T.29 N., R.116 W., on left bank half a mile upstream from Crystal Creek, 2 miles southeast of La Barge Meadows ranger station, and 29 miles northwest of La Barge.

Drainage area. -- 6.3 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ At site 300 ft upstream at different datum Oct. 1, 1940, to Sept. 30, 1942. Altitude of gage is 8,410 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 160 cfs.

Remarks.-No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, $120~\rm cfs$.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 23, 1941	6.75	103	1956	June 2, 1956	5.32	189
1942	May 26, 1942	6.84	112	1957	June 6, 1957	5.29	186
1951	May 26, 1951 June 16, 1951	5.17 4.62	188 124	1958	May 29, 1958 June 6, 1958	4.75 4.73	142 140
1952	May 4, 1952	-	(a)	1959	June 15, 1959	4.46	122
	May 15, 1952 June 7, 1952	4.70	(a) 132	1960	June 3, 1960	3.91	82
1953	June 13, 1953	4.77	140	1961	May 26, 1961	4.36	98
1954	May 19, 1954	4.74	136	1962	June 3, 1962	4.83	134
1955	May 22, 1955	4.47	107				

a Probably exceeded 120 cfs.

2085. La Barge Creek near Viola, Wyo. (Published as La Barge Creek near La Barge, 1913-16)

<u>Location</u>.--Lat 42°13'20", long 110°19'10", in sec.19, T.26 N., R.113 W., a quarter of a mile upstream from narrows, $2\frac{1}{2}$ miles downstream from Spring Creek, $4\frac{1}{2}$ miles southeast of Viola, and 7 miles southwest of La Barge.

Drainage area. -- 172 sq mi.

Gage.--Nonrecording prior to Nov. 8, 1916, at site $1\frac{1}{2}$ miles downstream at different datums; recording after Oct. 1, 1940. Altitude of gage is 6,890 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 450 cfs.

Remarks. -- Adjudicated diversions for irrigation of about 5,300 acres substantially affect peak flows. Peaks are principally from snowmelt. Records for 1913-14 furnished by State engineer of Wyoming. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913 1914 1915	May 27,31,1913 May 25,1914 Sept.26,1915	2.45 8.35 2.15	478 682 154	1943 1944 1945	May 5, 1943 June 10, 1944 May 7, 1945	6.01 5.48 5.07	547 384 272
1916	May 7, 1916	3.46	313	1946	May 9, 1946	5.59	381
1941 1942	June 9, 1941 May 27, 1942	5.00 5.06	302 318	1947 1948 1949	May 11, 1947 May 22, 1948 May 18, 1949	6.00 5.76 5.37	585 526 459

2090. La Barge Creek near La Barge, Wyo. (Published as Labarge Creek near Tulsa, 1932-34)

<u>Location</u>.--Lat 42°14', long 110°12', in sec.18, T.26 N., R.112 W., $1\frac{1}{2}$ miles upstream from mouth and 2 miles south of La Barge.

Drainage area. -- 193 sq mi.

 $\frac{\text{Gage.--Recording.}}{\text{gage is 6,592.87 ft above mean sea level, datum of 1929.}}$

Stage-discharge relation .-- Defined by current-meter measurements below 330 cfs.

Remarks.--Adjudicated diversions for irrigation of about 12,500 acres substantially affect peak flows. Peaks are principally from snowmelt. Records for 1913, 1915-16 published under the name of this station are not equivalent to records given herewith; the records for 1913, 1915-16 are included with those for La Barge Creek near Viola. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932 1933 1934 1935	May 15, 1932 June 2, 1933 Nov. 3, 1933 May 28, 1935	1.67 .88 2.32	410 233 64 389	1937 1938 1939	May 31, 1937 May 3, 1938 May 30, 1938 May 13, 1939	2.87 - 4.46 3.02	243 269 - 350
1936	May 16, 1936	2.57	442				

2095. Green River near Fontenelle, Wyo.

<u>Location</u>.--Lat 42°07', long 110°11', in SW_4^1 sec.20, T.25 N., R.112 W., 200 ft from U.S. Highway 189, l_2^1 miles downstream from Muddy Creek, and 4 miles northwest of Fontenelle.

Drainage area. -- 3,970 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 6,490 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements.

Bankfull stage .-- 10 ft.

Remarks.--Adjudicated diversions for irrigation of about 240,000 acres. Regulation by many small lakes and reservoirs. Regulation and diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak	stages	and	discharges
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	10011 000800 0110 0-1-1-1-0-1										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1947	June 22, 1947	7.26	10,500	1956	June 6, 1956	8.33	13,300				
1948	June 5, 1948	7.02	9,320	1957	June 10, 1957	8.11	12,500				
1949	June 21, 1949	6.66	8,180	1958	May 28, 1958	6.84	8,660				
1950	June 19, 1950	7.84	11,400	1959	June 19, 1959	7.43	10,300				
			1	1960	June 11, 1960	5.48	4,760				
1951	May 31, 1951	8,11	12,300	ļ.							
1952	June 10, 1952	7.43	9,980	1961	May 31, 1961	5.26	4,270				
1953	June 18, 1953	7.78	11,200	1962	June 24, 1962	6.93	8,250				
1954	June 30, 1954	7.58	10,900								
1955	June 16, 1955	5.93	5,880	1							

2105. Fontenelle Creek near Herschler Ranch, near Fontenelle, Wyo.

<u>Location</u>.--Lat 42°05'45", long 110°25'10", in NW_{ij}^{1} sec.2, T.24 N., R.115 W., on left bank 2 miles downstream from Dutch George Creek and 14 miles west of Fontenelle.

Drainage area. -- 152 sq mi.

Gage. -- Recording. Altitude of gage is 6,950 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 500 cfs and extended above by logarithmic plotting.

Remarks.--Diversions above station for irrigation of about 4,100 acres do not materially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 29, 1952	6.35	728	1956	May 29, 1956	5,60	494
	May 16, 1952	5.66	498	li .			
	May 30, 1952	5.32	398	1957	May 8, 1957	5.11	368
	June 24, 1952	4.69	238		May 19, 1957	5.32	417
				il	May 24, 1957	5,10	360
1953	Apr. 22, 1953	4.58	234	Į)	June 7, 1957	5,66	511
	May 30, 1953	4.34	176	ĮĮ.			
	June 5, 1953	4.62	232	1958	Apr. 19, 1958	4.18	166
	June 14, 1953	5.11	343	l	May 15, 1958	6.35	717
1954	Apr. 25, 1954	4.50	208	1959	June 16, 1959	4.66	266
	May 22, 1954	5.05	328		,		
				1960	Mar. 28. 1960	4.79	286
1955	May 2, 1955	4.28	194	ļ.	Apr. 5, 1960	5,68	516
	May 7, 1955	4.43	224	l	May 13, 1960	4.23	164
1	May 25, 1955	4.74	272	ii			_
	June 2, 1955	4.45	212	1961	July 4, 1961	4.31	182
1956	Dec. 24, 1955	a7.93	_	1962	Apr. 28, 1962	6.45	682
	Apr. 23, 1956	5.14	370		May 10, 1962	5.71	444
	May 11, 1956	4.88	307		June 4, 1962	5.32	337
a Ba	ckwater from ice					·	

2110. Fontenelle Creek near Fontenelle, Wyo.

<u>Location</u>.--Lat 42°05'50", long 110°13'20", in sec.3, T.24 N., R.113 W., or left bank 5 miles west of Fontenelle.

Drainage area .-- 224 sq mi.

Gage.--Nonrecording at site 150 ft upstream prior to July 30, 1938; recording thereafter. At different datum prior to Oct. 15, 1931. At datum 0.90 ft higher Oct. 15, 1931, to July 29, 1938. Altitude of gage is 6,580 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 600 cfs.

Remarks.--Adjudicated diversions for irrigation of about 8,000 acres substantially affect peak flows. Peaks are principally from snowmelt. Records for 1914 furnished by State engineer of Wyoming. Only annual peaks are shown

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 28, 1916	2.05	565	1941	June 9, 1941	2.24	228
1917	May 22, 1917	2.7	900		İ	ļ.	
1918	May 12,24,27,	1.8	496	1943	June 2, 1943	3.05	512
	June 13,14,1918	\$		1944	June 10, 1944	2.41	288
1919	Apr. 24, 1919	.76	138	1945	Apr. 21, 1945	2.46	306
1932	May 14, 1932	2.40	470	1946	May 10, 1946	2.63	366
1933	June 13,14, 1933	1.62	233	1947	June 12, 1947	3.19	590
1934	Mar. 12,13,14,	.80	38	1948	Apr. 29, 1948	2.53	348
	15, 1934	i	i .	1949	June 6, 1949	2.89	456
1935	May 28, 1935	2.22	444	1950	Apr. 23, 1950	3.58	722
1936	May 17, 1936	2.76	513	1951	May 30, 1951	3.70	680
1937	Apr. 16, 1937	2,30	367	1952	Apr. 30, 1952	3.56	527
1938	Apr. 19, 1938	4.00	922	1953	June 16, 1953	2.56	282
1939	May 12, 1939	2.35	268		}		
1940	May 19, 1940	1.38	66				

2125. Big Sandy Creek at Leckie Ranch, near Big Sandy, Wyo. (Published as Big Sandy Creek near Big Sandy, 1910-11 and in Water-Supply Paper 618)

<u>Location</u>.--Lat 42°35', long 109°17', in sec.18, T.30 N., R.104 W., on left bank at Leckie Ranch, half a mile downstream from Squaw Creek and 9 miles southeast of Big Sandy.

Drainage area. -- 94 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 31, 1911, at sites near present site at different datums; recording thereafter. Altitude of gage is 7,800 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 810 cfs.

Remarks. -- Adjudicated diversions for irrigation of 480 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 12,16, 1911	8.3	396	1943	May 29, 1943	5.95	741
1940	May 12, 1940	4.91	322		June 12, 1943 June 22, 1943	5.31 6.05	454 805
1941	May 13, 1941 May 18, 1941 May 27, 1941 June 18, 1941	5,50 5,48 5,63 5,56	600 591 658 627	1944	May 17, 1944 May 31, 1944 June 21, 1944 June 26, 1944	5.17 5.61 5.39 5.78	463 650 551 7 3 0
1942	May 27, 1942 June 9, 1942 June 19, 1942	6.18 6.12 5.20	890 860 450	1945	June 13, 1945 June 23, 1945	5.10 5.85	420 745
1943	May 4, 1943	6.17	454	1946	June 6, 1946	5.72	669

Peak stages and discharges of Big Sandy Creek at Leckie Ranch, near Pig Sandy, Wyo .-- Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 9, 1947	5.96	780	1953	June 14, 1953	6.79	1,310
	May 28, 1947	5.30	486				
	June 9, 1947	6.16	875	1954	May 22, 1954	6.00	811
	June 21, 1947	5.98	770	li .	June 27, 1954	5.31	479
	July 4, 1947	5.38	502	1955	May 11, 1955	5.03	483
1948	May 20, 1948	6.14	843	1935	May 21, 1955	5.38	635
1940	June 8, 1948	5.55	578	11	June 9, 1955	5.33	535
	Julie 0, 1940	5,55	370		Julie 3, 1300	3.33	335
1949	May 14, 1949	5.60	577	1956	June 2, 1956	6.21	1,060
	May 30, 1949	5.40	485	1	1	1	
	June 13, 1949	5.80	650	1957	June 7, 1957	6.83	1,180
	June 19, 1949	6.30	890	il	June 19, 1957	5.59	541
	-			li	June 30, 1957	6.61	1,060
1950	June 7, 1950	6.47	958	ll .	July 11, 1957	5.78	628
	June 17, 1950	6.85	1,180				
	June 25, 1950	6.34	874	1958	May 25, 1958	6.43	968
	July 2, 1950	6.10	735	11	1		
	July 11, 1950	5.52	540	1959	June 16, 1959	5,72	614
1951	May 28, 1951	6.32	984	1960	May 13, 1960	5.37	505
	July 17, 1951	6.81	916				
		ŀ		1961	May 28, 1961	5.18	461
1952	May 5, 1952	5.52	573	li	1		
	May 14, 1952	5.40	515	1962	May 10, 1962	6.76	630
	June 7, 1952	6.50	1,110		June 3, 1962	6.18	446
	June 27, 1952	5,33	487	ll	June 23, 1962	7.32	860

2135. Big Sandy Creek near Farson, Wyo.

<u>Location</u>.--Lat 42°19¹, 109°29¹, in $NW_{\overline{u}}^1$ sec.17, T.27 N., R.106 W., on left bank just upstream from Big Sandy Reservoir, 14 miles north of Farson.

Drainage area. -- 320 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 28, 1921; recording thereafter. At sites half a mile downstream Apr. 28, 1921, to Aug. 3, 1934, and 1½ miles upstream Apr. 17, 1953, to Nov. 11, 1954, both at different datums. Altitude of gage is 6,800 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 770 cfs.

Remarks.--Adjudicated diversions for irrigation of about 3,000 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	June 2, 1915	-	a600	1928	May 12, 1928	4.41	684
2020				l	May 26, 1928	4.87	853
1916	June 17, 1916	4.8	740		June 28, 1928	3,69	440
1917	June 26, 1917	5.65	1,160	1929	May 26, 1929	4.17	568
			-,		June 2, 1929	3.85	462
1921	May 18, 1921	3.54	431	l l	June 9, 1929	3.99	512
	May 30, 1921	4.88	842	l	June 18, 1929	4.00	515
	June 9, 1921	5.70	1,130		, , , , , , , , , , , , , , , , , , , ,	_,,,,	
			_	1930	May 31, 1930	4.15	548
1922	June 9, 1922	4.80	766		June 12, 1930	4.92	848
				į.	June 19, 1930	3.85	442
1923	May 28, 1923	4.75	760		Aug. 14, 1930	5.96	1,330
	June 13, 1923	4.72	752	i			
	July 2, 1923	3.74	484	1931	May 17, 1931	3.38	376
	July 15, 1923	4.07	573				
	July 25, 1923	3,57	438	1932	May 23, 1932	4.99	846
3.004					May 31, 1932	3.88	444
1924	May 18, 1924	3.78	495		June 17, 1932	4.43	636
	June 5, 1924	3.59	443		June 24, 1932	4.94	826
	June 16, 1924	3.73	465			i	
1927	Mo 10 1007	4 3 7		1933	June 3, 1933	4.45	642
196/	May 19, 1927	4.17	572	Ì	June 15, 1933	5.50	1,030
	June 14, 1927	5.09	941				
	June 29, 1927	5.45	1,080	1934	May 8, 1934	3.21	258

Peak stages and discharges of Big Sandy Creek near Farson, Wyo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 30, 1953 June 6, 1953 June 15, 1953	2.87 2.94 4.73	358 375 972	1957	July 1, 1957 July 12, 1957	7.40 6.69	980 631
1954	May 21, 1954	3.96	690	1958	May 26, 1958	7.25	898
1001	June 28, 1954	3.41	513	1959	June 17, 1959	6.62	563
1955	May 12, 1955 May 22, 1955 June 10, 1955	6.13 6.46 6.35	400 444 429	1960	May 14, 1960 June 5, 1960	6.29 5.79	492 368
1956	June 3, 1956	7.28	865	1961	May 29, 1961	6.09	404
1957	May 13, 1957 June 8, 1957	5.94 7.76	409 1,190	1962	May 10, 1962 June 4, 1962 June 24, 1962	6.52 6.16 6.89	559 415 680

2140. Little Sandy Creek near Elkhorn, Wyo.

Location.--Lat 42°32', long 109°13', in sec.35, T.30 N., R.104 W., on left bank 500 ft upstream from bridge and 7 miles northeast of Elkhorn.

Drainage area. -- 20.9 sq mi.

Gage.--Recording. Altitude of gage is 8,000 ft (estimated on basis of nearby bench mark).

Stage-discharge relation .-- Defined by current-meter measurements below 220 cfs.

Remarks.--Adjudicated diversions for irrigation of about 2,400 acres, of which 964 acres are in North Platte River basin (under Continental Divide ditch, a transmountain diversion), and the rest are above and below the station. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water		Gage	Discharge	Water	T	Gage	Discharge
year	Date	height (feet)	(cfs)	year	Date	height (feet)	(cfs)
1940	May 31, 1940	3.13	98	1952	June 7, 1952	3.85	266
	1	1		1953	June 14, 1953	3.96	289
1941	June 18, 1941	3.90	196	1954	June 27, 1954	3.52	198
1942	June 9, 1942	3.93	200	1955	June 14, 1955	3.02	112
1943	June 28, 1943	3.85	214	!!	1	İ	İ
1944	June 26, 1944	4.25	230	1956	June 2, 1956	3.47	190
1945	July 12, 1945	3.62	169	1957	June 30, 1957	4.04	298
		l		1958	May 26, 1958	3.73	232
1946	June 6, 1946	3.48	157	1959	June 16, 1959	3.46	174
1947	June 9, 1947	4.15	234	1960	June 4, 1960	3.05	120
1948	June 3, 1948	3.58	172	1	i ' '		
1949	June 19, 1949	3.85	232	1961	Apr. 3, 1961	3.87	270
1950	June 17, 1950	3,66	202	1962	June 23, 1962	3.46	190
1951	June 17, 1951	3.51	178				

2145. Little Sandy Creek above Eden, Wyo.

<u>Location</u>.--Lat 42°15′, long 109°18′, in SW_{4}^{1} sec.11, T.26 N., R.105 W., on right bank above diversion to Eden No. 2 Reservoir, 9 miles upstream from Pacific Creek, 11 miles northeast of Farson, and 14 miles northeast of Eden.

Drainage area. -- 170 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 6,760 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 190 cfs.

Remarks.--Flow regulated by Elkhorn Reservoir (capacity, 1,450 acre-ft). Diversions above station for irrigation of 6,450 acres. Regulation and diversions do not materially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges of Little Sandy Creek above Eden, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	June 16, 1955	6,05	70	1959 1960	June 18, 1959 Mar. 28, 1960	6.53	117 125
1956 1957 1958	June 5, 1956 July 2, 1957 May 28, 1958	6.80 7.76 7.50	150 227 188	1961 1962	Apr. 6, 1961 Apr. 17, 1962	a7.62 7.93	b75 290

a Backwater from ice.

2150. Pacific Creek near Farson, Wyo.

 $\frac{\text{Location}.\text{--Lat }42\,^\circ\text{O8}^{\,\prime},\,\text{long }109\,^\circ\text{18}^{\,\prime},\,\text{in sec.23, T.25 N., R.105 W., on left bank}}{1.0\,\,\text{mile upstream from Eden Canal, about 5 miles upstream from mouth, and}}$

Drainage area. -- 500 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,680 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks. -- Some regulation by Pacific No. 2 Reservoir (capacity, 1,400 acre-ft).

Diversion for irrigation of 650 acres above station. Peak flows are not materially affected by regulation or diversion. Base for partial-duration series, 120 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water• year	Date	Gage height (feet)	Discharge (cfs)
1955	Apr. 10, 1955 July 24, 1955	4.88	250 265	1958	May 9, 1958	3.87	120
1956	Mar. 21, 1956	_	550	1959	Apr. 6, 1959	5.68	461
1000	May 29, 1956	5.20	351	1960	Mar. 27, 1960	5.62	461
1957	Mar. 9, 1957 May 13, 1957 May 15, 1957	4.95 4.73 4.41	294 249 187	1961	Mar. 24, 1961 Apr. 3, 1961	4.43 4.62	187 227
	June 17, 1957	4.23	167	1962	Mar. 28, 1962	a6.64	ъ500

2160. Big Sandy Creek below Eden, Wyo.

<u>Location</u>.--Lat 42°00', long 109°35', in SE_4^1 sec.31, T.24 N., R.107 W., on right bank an eighth of a mile downstream from Simpson Gulch and 8.0 miles southwest of Eden.

Drainage area. -- 1,610 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,460 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 590 cfs.

Remarks.--Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Regulation and diversions do not materially affect peak flows. Peak flows are principally from snow-melt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Jan. 5, 1955 Apr. 10, 1955	a4.39	313	1958	May 28, 1958	4.63	612
1956	Mar. 20, 1956	a7.22	650	1959	Apr. 6, 1959	3.81	280
1957	Feb. 25, 1957	a4.92	-	1961	Apr. 4, 1961	3.80	253
	July 2, 1957	_	447	1962	Mar. 28, 1962	-	b5 80 ·

a Backwater from ice. b Maximum daily discharge.

b Maximum daily.

a Backwater from ice. b Maximum daily discharge.

2165. Green River at Green River, Wyo.

Location. --Lat 41°32', long 109°29', in NW_4^1 sec.22, T.18 N., R.107 W., 100 ft downstream from ratiroad bridge at town of Green River, l_2^1 miles upstream from Bitter Creek, and at mile 387.

Drainage area. -- 7,670 sq mi, approximately.

<u>Gage.</u>--Nonrecording. At site 60 ft upstream at different datum prior to Cct. 31, 1906. At site three-quarters of a mile downstream at different datum Mar. 5, 1915, to Sept. 27, 1920. Datum of gage is 6,071.07 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined}$ by current-meter measurements below 20,000 cfs.

Remarks.--The 1949 Bureau of the Census map of irrigated acreage shows irrigation of about 140,000 acres above station. Natural flow also affected by storage reservoirs, transmountain diversions, and power developments. Diversions and regulation substantially affect peak flows. Peaks are principally from snowmelt. Records for 1891 furnished by State engineer of Wyoming; those for 1940-45 estimated by the Engineering Advisory Committee to the Upper Colorado River Basin Compact Commission. Only annual peaks are

Peak stages and discharges

Water year	● Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	June 27, 30,	4.25	7,020	1921	June 15, 1921	7.2	21,200
	July 1,2,1895			1922	June 12, 1922	5,85	13,300
		l		1923	June 15, 1923	5.6	12,100
1896	June 21, 1896	6.20	15,500	1924	Apr. 9, 1924	4.85	8,320
1897	May 23, 1897	5.85	17,900	1925	July 6, 1925	5.65	10,500
1898	June 27, 1898	5.23	15,100	ll			İ
1899	June 24, 1899	6.65	21,300	1926	July 11, 1926	4.39	5,550
				1927	July 1, 1927	7.0	16,700
1901	May 22, 1901	5.20	12,400	1928	May 30, 1928	6.2	13,100
1902	June 13, 1902	4.75	10,800	1929	June 19, 1929	4.9	7,800
1903	June 16,17,20,1903	5.40	13,100	1930	Aug. 15, 1930	5.88	9,230
1904	May 27, 1904	5.70	13,100	ł			
1905	June 19, 1905	4.3	8,540	1931	June 11, 1931	2.86	2,950
				1932	June 29, 1932	5.37	12,000
1906	June 16, 1906	5.4	12,200	1933	June 16, 1933	5.40	11,700
		_		1934	May 25, 1934	2.53	1,850
1915	June 4, 1915	6.4	4,150	1935	June 17, 1935	5.3	12,000
1916	June 22, 1916	10.0	14,100	1936	June 4, 1936	5.88	15,600
1917	June 28, 1917	11.45	18,900	1937	July 13, 1937	4.50	10,600
1918	June 19, 1918	12.3	22,200	1938	June 9, 1938	4.65	10,200
1919	June 1, 1919	8.3	8,330	1939	June 3, 1939	3.71	4,830
1920	June 12, 1920	9.6	12,300				1

2170. Green River near Green River, Wyo.

Location. --Lat 41°31', long 109°27', in NW1NE1 sec.26, T.18 N., R.107 W., on right bank a quarter of a mile downstream from Bitter Creek, 1 mile southeast of town of Green River, and 4 miles upstream from high-water line of proposed Flaming Gorge Reservoir.

<u>Drainage area</u>.--About 10,000 sq mi, of which 300 sq mi is probably noncontributing.

Gage. -- Recording. Altitude of gage is 6,050 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 13,000 cfs.

Remarks.--Natural flow affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas. High peak flows are not materially affected by manmade changes. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges of Green River near Green River, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	June 3, 1951	7.37	13,600	1957	June 11, 1957	7.01	13,400
1952	June 11, 1952	6.32	11,500	1958	May 28, 1958	5.71	9,410
1953	June 19, 1953	6.53	11,800	1959	June 19, 1959	5.91	9,820
1954	July 1, 1954	6.30	10,600	1960	Mar. 26, 1960	5.35	8,200
1955	June 16, 1955	4.91	6,060	1961	June 2, 1961	3.76	4,240
1956	May 29, 1956	7.42	14,600	1962	June 25, 1962	5.52	8,680

2185. Blacks Fork near Millburne, Wyo.

<u>Location</u>.--Lat 41°03', long 110°34', in sec.35, T.13 N., R.117 W., on right bank 3 miles downstream from Little West Fork, $4\frac{1}{2}$ miles north of Utah-Wyoming State line, and 15 miles southwest of Millburne.

Drainage area. -- 156 sq mi.

Gage.--Recording. At site 150 ft upstream at different datum prior to Nov. 5, 1948. At datum 2.00 ft higher Nov. 5, 1948, to Sept. 30, 1952. Altitude of gage is 8,380 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 1,500 cfs.

Remarks.--Diversions above station in Wyoming used for supplemental supply for irrigation of about 2,100 acres, mainly below station. Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 1,100 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 15, 1940	2.82	1,360	1951	June 17, 1951	2.55	1,180
1941	May 13, 1941 May 23, 1941 June 17, 1941	3.07 2.61 2.96	1,570 1,190 1,470	1952	May 5, 1952 June 7, 1952 June 26, 1952	2.67 3.04 1.67	1,190 1,880 1,100
1942	May 25, 1942 June 8, 1942	3.16 3.04	1,650 1,550	1953	June 15, 1953	5,53	2,460
1943	May 29, 1943	2.43	1,060	1954	May 22, 1954	5.07	1,030
1944	June 1, 1944	2.76	1,280	1955	June 9, 1955	5.24	1,260
3045	June 26, 1944	3.46	1,960	1956	May 22, 1956 June 2, 1956	5.60 5.43	1,840 1,600
1945	June 22, 1945	2.77	1,450	1957	June 7, 1957	6.00	2,530
1946	June 6, 1946	2.41	1,160		June 28, 1957	5.66	1,980
1947	May 8, 1947 June 9, 1947 June 20, 1947	2.84 2.52 2.48	1,420 1,180 1,240	1958	May 27, 1958 June 7, 1958	5.82 5.64	2,180 1,960
1948	May 19, 1948	3.27	1,900	1959	June 16, 1959	5.79	1,640
1949	June 13, 1949 June 19, 1949	2.91 2.95	1,130 1,160	1960	May 12, 1960 June 4, 1960	5.41 5.69	1,140 1,500
1950	June 1, 1950	3.01	1,220	1961	May 28, 1961	5.25	934
	June 7, 1950 June 12, 1950	2.93 2.79	1,200 1,210	1962	May 9, 1962 June 14, 1962	5.53 5.60	1,210 1,270
1951	May 28, 1951	3.04	1,590		June 21, 1962	5.75	1,390

2190. Blacks Fork near Urie, Wyo.

 $\frac{Location.\text{--Lat 41°21', long }110°20', \text{ in sec.24, T.16 N., R.115 W., 2 miles down-stream from Quartz Creek and }2\frac{1}{2}\text{ miles north of Urie.}$

Drainage area. -- 261 sq mi.

Gage. -- Nonrecording Aug. 21, 1913, to Sept. 30, 1924, at former bridge or abandoned channel 800 ft upstream at different datum (datum lowered 0.50 ft Aug. 19, 1915); recording thereafter. Oct. 21, 1937, to Apr. 1, 1939, on abandoned channel 500 ft upstream at different datum. Altitude of gage is 6,560 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 1,900 cfs.

Remarks. -- Adjudicated diversions above station for irrigation of about 57,000 acres. Water is exported to and imported from Smith Fork. Four small reservoirs above station (total adjudication, about 1,100 acre-ft). Diversions and regulation substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

			Peak stages a	and disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914 1915	May 23, 1914 June 2,23, 1915	3.65 2.1	1,760 670	1941 1942 1943	May 14, 1941 May 26, 1942 June 2, 1943	5.67 5.81 5.08	1,170 913 696
1916 1917 1918	June 11, 1916 June 19, 1917 June 19, 1918	2.7 4.72 4.0	710 2,680 1,890	1944 1945	June 27, 1944 June 23, 1945	6.26 5.05	1,110 687
1919 1920	May 29, 1919 May 23,27, 1920	2.6 3.6	680 1,360	1946 1947 1948	June 6, 1946 May 9, 1947 May 20, 1948	4.58 5.97 6.68	534 998 1,280
1921 1922 1923	June 7, 1921 May 26, 1922 May 27, 1923	4.4 3.95 4.42	2,310 1,690 2,280	1949 1950	June 20, 1949 June 2, 1950	5.58 5.93	858 920
1924	May 17, 1924 May 16, 1938	3.38	1,220	1951 1952 1953	May 29, 1951 May 5, 1952 June 14, 1953	6.44 6.60 6.80	1,190 1,250 1,270
1939 1940	May 12, 1939 May 16, 1940	3.04 4.22	159 452	1954 1955	May 22, 1954 June 9, 1955	2.93 4.41	143 422

Peak stages and discharges

2200. East Fork of Smith Fork near Robertson, Wyo.

<u>Location</u>.--Lat 41°03', long 110°24', in NE $\frac{1}{4}$ sec.5, T.12 N., R.115 W., 1 mile upstream from Gilbert Creek and 9 miles southeast of Robertson.

Drainage area. -- 53.0 sq mi.

<u>Gage</u>.--Recording. At datum 3.96 ft higher prior to July 12, 1957. Altitude of gage is 8,490 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 700 cfs.

Remarks. -- No diversion above station. Peaks are principally from snowmelt. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1940	May 13, 1940	2.50	364	1944	July 2, 1944	2.63	385
1941	May 13, 1941 May 18, 1941	2.53 2.31	440 344	1945	June 22, 1945	2.78	446
	May 26, 1941 June 4, 1941	2.62 2.36	448 336	1946	June 6, 1946	2.46	325
	June 18, 1941	2.73	472	1947	May 27, 1947 June 9, 1947	2.43 2.63	322 377
1942	May 27, 1942 June 8, 1942	2.80 2.68	480 434		June 20, 1947	2.53	337
1943	May 29, 1943	2.29	288	1948	May 25, 1948 June 3, 1948	2.75 2.59	445 382
1944	June 1, 1944 June 26, 1944	2.56 3.21	389 644	1949	May 30, 1949 June 13, 1949	2.37 2.70	320 440

Peak stages and discharges of East Fork of Smith Fork near Robertson, Wyo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 19, 1949	3.07	558	1956	June 2, 1956	2.01	494
1950	June 2, 1950 June 7, 1950 June 12, 1950	2.35 2.35 2.22	425 425 373	1957	June 8, 1957 June 18, 1957 June 28, 1957	2.80 1.90 2.33	734 382 578
1951	May 29, 1951 June 18, 1951	2.49 2.25	521 437	1958	May 28, 1958	6.18	540
1952	May 5, 1952 June 8, 1952	2.08 3.40	3 41 855	1959	June 9, 1959 June 3, 1960	6.01 5.95	476 364
1953	June 13, 1953	3.98	1,200	1961	May 28, 1961	5.59	313
1954	May 21, 1954	1.42	263	1962	June 21, 1962	6.08	401
1955	June 9, 1955	1.82	377_				

2205. West Fork of Smith Fork near Robertson, Wyo.

Location. --Lat 41°01', long 110°29', in sec.15, T.12 N., R.116 W., on left bank three-quarters of a mile downstream from Archie Creek and 12 miles southwest of Robertson.

Drainage area .-- 37.2 sq mi.

Gage. -- Recording. Altitude of gage is 8,650 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 780 cfs.

 $\underline{\underline{Remarks}}$.-No diversion above station. Peaks are principally from snowmelt. $\underline{\underline{Base}}$ for partial-duration series, 280 cfs.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage reight (feet)	Discharge (cfs)
1940	May 11, 1940	2.37	363	1951	May 27, 1951	3.00	840
1941	May 13, 1941 May 22, 1941 June 12, 1941	2.60 2.33 2.19	465 345 284	1952	May 13, 1952 May 28, 1952	2.31 2.24	336 303
1942	May 25, 1942	2.76	540	1953	May 31, 1953 June 10, 1953	2.25 2.66	340 552
1943	May 2, 1943	2.39	380	1954	May 9, 1954	1.92	190
1944	May 22, 1944	2.40	340	1955	May 13, 1955	2.08	244
1945	May 3, 1945 May 12, 1945	a3.57 2.24	_ 278	1956	May 22, 1956	2.40	410
1946	May 4, 1946	2.19	256	1957	June 6, 1957	3.00	850
1947	May 16, 1947	2,28	296	1958	May 25, 1958	2.44	455
1948	May 19, 1948	2.99	812	1959	June 6, 1959	1.91	234
1949	May 25, 1949	2.11		1960	May 12, 1960	2.34	365
		l	244	1961	May 11, 1961	1.56	155
1950	May 24, 1950 May 30, 1950 June 6, 1950	2.82 3.08 2.60	676 920 500	1962	May 6, 1962	2.32	508

a Backwater from ice.

2215. Smith Fork at Mountainview, Wyo.

Location. --Lat 41°16', long 110°20', in sec.23, T.15 N., R.115 W., on right bank just downstream from highway bridge in southwestern edge of

Drainage area. -- 192 sq mi.

Gage .-- Recording. Altitude of gage is 6,830 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Adjudications for irrigation of about 17,800 acres. One small reservoir (adjudicated 305.66 acre-ft per year) for irrigation. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 24, 1942	3,96	946	1951	May 28, 1951	4.34	840
1943	June 2, 1943	3.17	510	1952	May 5, 1952	4,42	870
1944	May 17, 1944	3,38	5 9 8	1953	June 13, 1953	4.53	1,100
1945	June 5, 1945	3.09	366	1954	May 22, 1954	2,68	154
	,	1	}	1955	June 9, 1955	2.85	155
1947	May 9, 1947	3.93	796	l.	1		
1948	May 20, 1948	4.23	1,060	1956	May 29, 1956	3.94	652
1949	June 20, 1949	3,03	422	1957	June 9, 1957	4.56	1,070
1950	May 31, 1950	4.20	850	il	1		

2220. Blacks Fork near Lyman, Wyo.

Location.--Lat 41°27', long 110°10', in sec.16, T.17 N., R.113 W., on left bank 200 ft downstream from bridge on U.S. Highway 30S, 7 miles downstream from Cottonwood Creek, and 11 miles northeast of Lyman.

Drainage area. -- 821 sq mi.

Gage. -- Recording. Altitude of gage is 6,380 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 2,900 cfs.

Bankfull stage .-- 6 ft.

Remarks.--Adjudicated diversions for irrigation of about 85,000 acres. Seven small reservoirs above station (total adjudication, 1,456,705 acre-ft per year) for irrigation and recreation. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1938 1939	May 17, 1938 Mar. 14, 1939 May 12, 1939	4.75 a4.68	1,440 - 960	1949 1950	June 20, 1949 Mar. 5, 1950 June 3, 1950	a6.15	1,380 - 1,800
1940 1941	May 27, 1940 May 14, 1941	4.39 4.55	1,140	1951 1952	May 29, 1951 Apr. 8, 1952	5.92 a8.17	1,940
1942 1943 1944	May 27, 1942 June 2, 1943 Apr. 5, 1944	5.64 4.97 5.60	1,980 1,420 1,800	1953 1954	May 5, 1952 June 15, 1953 July 27, 1954	6.67 3.14	2,290 2,900 376
1945 1947	June 25, 1945	4.55 6.58	1,060	1955	June 16, 1955	3.07	655
1948 1949	June 12, 1947 May 20, 1948 Mar. 16, 1949	5.84 a5.44	2,390 1,880	1956 1957	May 29, 1956 June 14, 1957	5.90 6.46	2,160 2,670

a Backwater from ice.

2230. Hams Fork near Elk Creek ranger station, Wyo.

Location.--Lat 42°06'40", long 110°42'40", in $SE_1^1NW_{\frac{1}{4}}^1$ sec.35, T.25 N., R.117 W., on left bank 1 mile downstream from Pole Creek, $2\frac{1}{2}$ miles upstream from Beaver Creek, 9 miles south of Elk Creek ranger station, and 23 miles northwest of Kemmerer.

Drainage area. -- 128 sq mi.

Gage .-- Recording. Altitude of gage is 7,455 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 870 cfs.

Remarks. -- Diversions above station for irrigation of about 600 acres do not materially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 350 cfs.

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 29, 1953 June 5, 1953 June 14, 1953	5.82 6.05 6.44	456 528 664	1957	May 19, 1957 June 7, 1957 June 21, 1957	6.83 7.69 5.90	802 1,010 474
1954	May 12, 1954	6.36	636	1958	May 22, 1958	7.41	1,000
1955	May 7, 1955 May 22, 1955 June 9, 1955	5.92 5.70 5.85	504 438 465	1959	May 14, 1959 June 7, 1959 June 16, 1959	5.83 5.73 5.75	444 414 435
1956	Apr. 22, 1956 May 9, 1956	6.25 6.64	598 734	1960	May 13, 1960	6.72	744
	May 25, 1956	7.36	1,010	1961	May 27, 1961	5.01	240
1957	May 8, 1957	6.38	643	1962	June 4, 1962	6.34	594

2235. Hams Fork near Frontier, Wyo.

Location.--Lat 41°51', long 110°33', in lot 39, $SE_{u}^{\frac{1}{4}}SE_{u}^{\frac{1}{4}}$ sec.27, T.22 N., R.116 W., on right bank 800 ft upstream from highway bridge, $1\frac{1}{2}$ miles upstream from Willow Creek, and $3\frac{1}{2}$ miles northwest of Frontier.

Drainage area. -- 298 sq mi.

Gage. -- Recording. Altitude of gage is 6,970 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements .

Bankfull stage .-- 4 ft.

Remarks.--Adjudicated diversions for irrigation of about 7,000 acres. Diversions for municipal supply of Kemmerer from reservoir (capacity, 1,058 acre-ft) above station. Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 1,300 cfs.

		_					
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 20, 1946	-	al,700	1954	May 13, 1954	3.49	635
1947	May 13, 1947	5.65	1,370	1955	May 8, 1955	4.01	834
1948	Apr. 30, 1948 May 9, 1948 May 19, 1948	5.40 5.54 5.87	1,330 1,400 1,560	1956	Apr. 25, 1956	4.82	1,220
1949	May 19, 1949	4.73	1,020	1957	May 20, 1957	4.81	1,240
1950	Apr. 23, 1950	6.26	1,900	1958	May 23, 1958	4.99	1,380
1000	May 19, 1950 May 24, 1950 June 9, 1950	6.74 6.56 5.86	2,450 2,220 1,540	1959	Apr. 3, 1959 Apr. 27, 1959	b4.53 3.52	- 506
1951	May 31, 1951	5.70	1,460	1960	Apr. 7, 1960	4.55	1,020
1952	Apr. 29, 1952	6.34	1,940	1961	May 10, 1961	3.18	390
1002	May 5, 1952	6.28	1,920	1962	May 2, 1962	5.00	1,420
1953	Apr. 23, 1953	3.77	695				
a Es	timated. b	Backwater	from ice.				

b Backwater from ice.

2240. Hams Fork at Diamondville, Wyo. (Published as "at Kemmerer" 1918)

<u>Location</u>.--Lat 41°47', long 110°32', in SM_{η}^{1} sec.24, T.21 N., R.116 W., at highway bridge at Diamondville, 4 miles downstream from Willow Creek.

Drainage area. -- 386 sq mi.

<u>Gage.</u>--Nonrecording. At datum 0:51 ft higher Oct. 1, 1918, to Sept. 30, 1926, and at datum 1.0 ft higher Oct. 1, 1926, to Feb. 28, 1933. Altitude of gage is 6,870 ft (estimated from known elevation nearby).

Stage-discharge relation. -- Defined by current-meter measurements below 1,800 cfs.

Remarks. -- Adjudicated diversions for irrigation of 8,450 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

	Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)		
1919	Apr. 30, 1919	2.9	690	1928	May 2, 1928	3.22	1,400		
1920	May 23, 1920	4.4	2,980	1929	May 25, 1929	3.26	1,570		
	1 ' '		1	1930	Apr. 25, 1930	3.10	1,110		
1921	May 30, 1921	4.22	2,200	1	1		,		
1922	May 6, 1922	4.05	2,050	1931	Apr. 13, 1931	2.05	285		
1923	May 11, 1923	4.55	3,250	1932	May 15, 1932	3.77	1,930		
1924	Apr. 14, 1924	3.97	2,150		1 -				
1925	May 17, 1925	3.04	600	1946	Apr.20,28, 1946	5.66	1,650		
	1	l		1947	May 7, 1947	5.30	1,460		
1926	Apr. 21, May 6,	2.86	522	1948	May 20, 1948	5,60	1,600		
	1926		1	1949	May 19, 1949	4.90	1,240		
1927	May 19, 1927	3.16	1.380		1 -	ľ	l '		

Peak stages and discharges

2250. Blacks Fork near Green River, Wyo.

Location.--Lat 41°23', long 109°37', in sec.8, T.16 N., R.108 W., on right bank 40 ft downstream from highway bridge, 450 ft downstream from Dry Cree'c, 12.5 miles southwest of town of Green River, and 14.3 miles upstream from mouth.

Drainage area. -- 3,670 sq mi, approximately.

<u>Gage.</u>--Recording. At site 250 ft upstream prior to Aug. 19, 1955. Datum of gage is 6,017.26 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements. .

Remarks.--Adjudicated diversions for irrigation of 114,300 acres. One reservoir for Kemmerer water supply (capacity, 1,058 acre-ft) and 17 smaller reservoirs for irrigation, recreation, and railroad use (total adjudication, 2,345 acre-ft per year) above station. The Bureau of the Census map of irrigated acreage (1949) shows diversions for irrigation of 75,000 acres. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1948 1949 1950	Mar. 26, 1948 June 5, 1949 Feb. 28, 1950 May 27, 1950	6.93 5.61 al3.66	4,290 2,630 - 3,840	1956 1957 1958 1959 1960	May 30, 1956 June 11, 1957 May 26, 1958 June 30, 1959 Mar, 21, 1960	5.98 6.97 5.42 4.28 6.67	2,780 4,170 2,730 1,580 4,670
1951 1952 1953 1954 1955	June 3, 1951 May 7, 1952 June 16, 1953 Sept. 3, 1954 July 25, 1955	6.54 - 6.17 3.77 4.41	3,390 5,500 3,060 779 1,280	1961 1962	Aug. 25, 1961 Mar. 30, 1962	3.28 10.07	593 10,400

a Backwater from ice.

2255. Green River near Linwood, Utah

Location. --Lat 40°58'00", long 109°34'40", in SE_{π}^1 sec.29, T.3 N., R.21 E., on right bank a quarter of a mile upstream from Henrys Fork, 2 miles south of Wyoming-Utah State line, and 5 miles southeast of Linwood.

Drainage area. -- 14,300 sq mi, approximately.

Gage.--Recording. At site three-quarters of a mile upstream at different datum prior to Oct. 17, 1930. At datum 0.77 ft higher Oct. 17, 1930, to Oct. 22, 1933. Datum of gage is 5,844.64 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements.

Bankfull stage .-- 11 ft.

Remarks.--The 1949 Bureau of the Census map of irrigated acreage shows irrigation of about 215,000 acres. Natural flow is also affected by transmountain diversions, storage reservoirs, and power developments. Diversions and regulation substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 20, 1929	6.10	8,250	1947	June 13, 1947	10.39	17,100
1930	Aug. 15, 1930	7.45	13,400	1948 1949	June 6, 1948 June 22, 1949	8.32 8.08	11,700
1931	June 12, 1931	2.64	3,260	1950	Mar. 1, 1950	a13.47	10,200
1932	June 30, 1932	7.72	10,800	1500	June 21, 1950	-	14,400
1933	June 17, 1933	8.02	11,800		1	İ	2.,
1934	May 26, 1934	2,38	1,830	1951	June 3, 1951	11.12	16,700
1935	June 17, 1935	9.11	12,600	1952	June 11, 1952	9.58	13,400
				1953	June 19, 1953	9.57	13,400
1936	June 4, 1936	10.11	15,200	1954	May 26, 1954	8.15	11,000
1937	July 13, 1937	8.30	10,300	1955	June 17, 1955	6.22	6,820
1938 1939	June 10, 1938 May 14, 1939	7.87	10,000	1956	Mar. 70 10EC	13.04	17 000
1940	May 14, 1939 May 31, 1940	5.30 4.65	5,380 4,340	1957	May 30, 1956 June 12, 1957	11.24 11.77	17,000 18,000
1340	May 31, 1340	4.00	4,540	1958	May 29, 1958	8.78	12,100
1941	May 30, 1941	7.62	10,000	1959	June 21, 1959	8.18	11,000
1942	June 12, 1942	7.90	10,200	1960	Mar. 22, 1960	a10.72	,
1943	June 4, 1943	9.10	12,900		June 12, 1960	-	5,780
1944	Apr. 3, 1944	9.84	15,400	1			
1945	June 27, 1945	7.56	9,740	1961	June 2, 1961	4.38	4,260
				. 1962	Mar. 28, 1962	9.37	13,100
1946	June 21, 1946	7.40	9,360	1			

a Backwater from ice.

2260. Henrys Fork near Lonetree, Wyo.

Location.--Lat 41°00', long l10°16', in $N_2^{\frac{1}{2}}$ sec.21, T.12 N., R.114 W., on right bank half a mile downstream from Ashley National Forest boundary, 1 mile downstream from West Fork, $1_2^{\frac{1}{2}}$ miles downstream from Utah-Wyoning State line, and 7 miles southwest of Lonetree.

Drainage area. -- 56 sq mi, approximately.

 $\frac{\text{Gage.--Recording.}}{\text{Aug. 12, 1953.}} \quad \text{At site half a mile upstream at different datum prior to} \\ \text{Altitude of gage is 8,340 ft (by barometer).}$

 $\frac{\text{Stage-discharge relation.--Defined at present site by current-mater measurements}}{\text{below 190 cfs and extended above on basis of slope-area measurement at}}$

Remarks. -- One diversion in Utah does not substantially affect peak flows.

Peaks are principally from snowmelt. Base for partial-duration series, 300 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 3, 1943 May 29, 1943	2.55 2.49	343 310	1944	June 26, 1944	3.78	822
1944	May 16, 1944	2.53	339	1945	June 24, 1945	3.19	434
	June 1, 1944 June 9, 1944	2.95 2.43	494 303	1946	June 5, 1946	2.82	294

Peak stages and discharges of Henrys Fork near Lonetree, Wyo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1947	May 8, 1947	3,53	562	1953	June 13, 1953	4.37	1,860
	May 27, 1947 June 8, 1947 June 20, 1947	2.88 3.03 2,94	302 362 326	1954	May 22, 1954	4.09	252
	_			1955	June 9, 1955	4.61	496
1948	May 19, 1948 May 24, 1948 June 2, 1948	3.60 3.36 3.12	625 529 433	1956	June 2, 1956	4.36	370
	·	ł		1957	June 8, 1957	5.28	828
1949	May 29, 1949 June 12, 1949	2.80 3.00	338		June 27, 1957	4.85	580
	June 12, 1949 June 19, 1949	3.70	454 710	1958	May 25, 1958	4.74	592
1950	May 30, 1950 June 6, 1950	3.60 3.29	665 580	1959	June 1, 1959	4.66	416
	suite 0, 1500	3.23	550	1960	June 3, 1960	4.65	•530
1951	May 27, 1951 June 17, 1951	3.30 2.69	629 351	1961	May 27, 1961	4.37	337
1952	May 15, 1952 June 6, 1952 June 26, 1952	2.73 3.47 2.59	367 719 323	1962	June 13, 1962 June 21, 1962	4.67 4.84	440 534

2265. Middle Fork Beaver Creek near Lonetree, Wyo.

Location.--Lat 40°56'40", long 110°10'40", in SW $\frac{1}{4}$ sec.31, T.3 N., R.16 E., Salt Lake meridian, on left bank 500 ft north of forest boundary, 1 mile southwest of Hole-in-the-Rock ranger station, $3\frac{1}{2}$ miles south of Utah-Wyoming State line, and $7\frac{1}{2}$ miles south of Lonetree.

Drainage area. -- 28 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,600 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks. -- No diversion above station. Peak flows are principally from snowmelt. Base for partial-duration series, 200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 18, 1949	3.57	a523	1957	June 6, 1957 June 27, 1957	3.37 3.02	480 360
1950	May 30, 1950	2.94	257		,		
1951	May 27, 1951	3.19	387	1958	May 25, 1958 June 7, 1958	3.02 2.68	323 251
1952	June 6, 1952	3.73	618	1959	June 6, 1959	2.78	276
1953	June 12, 1953	3.98	663	1960	May 3, 1960	2.75	266
1954	May 22, 1954	1.85	91	1961	May 28, 1961	2,74	239
1955	June 7, 1955	2,62	248	1962	May 10, 1962	2.60	212
1956	May 25, 1956	2.48	219		June 13, 1962 June 21, 1962	2.90 2.87	279 276

a Annual peak only.

2275. West Fork Beaver Creek near Lonetree, Wyo.

<u>Location</u>.--Lat 40°56'50", long ll0°13'00", in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.35, T.3 °., R.15 E., Salt Lake meridian, on right bank at forest boundary, an eighth of a mile upstream from Fellow Creek, $3\frac{1}{2}$ miles south of Utah-Wyoming State line, and $7\frac{1}{2}$ miles southwest of Lonetree.

Drainage area. -- 23 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,700 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{and\ extended\ above\ by\ logarithmic\ plotting.}$

 $\underline{\underline{Remarks}}$.--No diversion above station. Peak flows are principally from snowmelt. $\underline{\underline{Base}}$ for partial-duration series, 100 cfs.

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 18, 1949	3.13	289	1957	June 7, 1957 June 27, 1957	3.25 3.07	330 243
1950	May 30, 1950	2.28	110			0.00	000
1951	June 17, 1951	2.43	145	1958	May 26, 1958 June 6, 1958	2.92 2.74	200 154
1952	May 14, 1952	2.27	108	1959	June 6, 1959	2.61	135
	June 7, 1952 June 27, 1952	2.91 2.28	255 125	1960	June 2, 1960	2.65	151
1953	June 13, 1953	3.17	417	1961	May 28, 1961	2.58	114
1954	May 22, 1954	2.03	74	1962	May 8, 1962 June 14, 1962	2.56 2.63	114 137
1955	June 9, 1955	2.44	168		June 21, 1962	2.67	154
1956	May 25, 1956	2.28	100				

2280. Henrys Fork near Burntfork, Wyo.

<u>Location</u>.--Lat 41°03', long 110°03', in sec.4, T.12 N., R.112 W., on left bank at <u>Uinta-Sweetwater</u> County line, $2\frac{1}{2}$ miles upstream from Burntfork and $2\frac{1}{4}$ miles west of Burntfork School.

Drainage area. -- 242 sq mi.

Gage.--Recording. At site 400 ft upstream at different datum prior to Dec. 22, 1948. Altitude of gage is 7,120 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 860 cfs.

Remarks. -- Adjudicated diversions for irrigation of about 9,000 acres. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 1, 1943	5.81	396	1949	June 19, 1949	4.38	1,190
1944	June 26, 1944	4.76	1.040	1950	June 2, 1950	3.53	578.
1945	June 24, 1945	3.87	535		_, _,_,		
	_			1951	June 1. 1951	3.53	620
1946	Sept.12, 1946	3.45	340	1952	June 7, 1952	4.95	1,400
1947	June 21, 1947	4.93	924	1953	June 14, 1953	5.29	1,830
1948	May 19 or 20,	4.09	646	1954	Mar. 17, 1954	a3.36	
	1948				July 20, 1954		375

a Backwater from ice.

2285. Burnt Fork near Burntfork, Wyo.

<u>Location</u>.--Lat $40^\circ56'50''$, long $110^\circ04'00''$, in SW^1_{lk} sec.31, T.3 N., R.17 E., in <u>Utah</u>, on right bank half a mile west of Ashley National Forest boundary and 7 miles southwest of Burntfork.

Drainage area. -- 52.8 sq mi.

Gage .-- Recording. Altitude of gage is 8,300 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 230 cfs and extended to 600 cfs on basis of a float-area determination.

Remarks. -- No diversion or regulation. Peaks are principally from snowmelt.

Base for partial-duration series, 100 cfs. Only annual peaks are shown subsequent to 1956.

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1944	May 16, 1944 May 23, 1944	6.28 6.21	272 277	1950	July 19, 1950	5.84	118	
	May 30, 1944	6.90	436	1951	May 27, 1951	6.39	201	
	June 9, 1944	6.33	285		June 17, 1951	6.43	195	
	June 15, 1944	6.24	261		June 26, 1951	6.00	128	
	June 26, 1944	7.28	540		Aug. 4, 1951	5.85	109	
	July 2, 1944	5.33	285					
				1952	May 5, 1952	6.08	139	
1945	May 11, 1945	5.98	213		May 13, 1952	6.12	177	
	June 5, 1945	5.68	130		June 6, 1952	8.13	599	
	June 14, 1945	5.70	134	ł	June 27, 1952	6.09	120	
	June 22, 1945	6.09	239	j	July 27, 1952	5.98	103	
	July 10, 1945	5.76	131		Aug. 10, 1952	6.14	129	
1946	June 10. 1946	5.54	104	1953	June 4, 1953	6.18	149	
			101	1000	June 10, 1953	6.67	247	
1947	May S, 1947	6.43	241		June 13, 1953	7.55	442	
	May 28, 1947	5.85	140	1	,		_	
	June 9, 1947	6.20	200	1954	May 22, 1954	6.17	136	
	June 20, 1947	6.05	173	Ì				
	July 8, 1947	6.08	178	1955	June 9, 1955	6.51	198	
3.040					June 15, 1955	6.19	138	
1948	May 19, 1948	7.56	452					
	June 2, 1948	6.50	242	1956	May 26, 1956	6.36	158	
1949	May 14, 1949	5.86	131	l	June 5, 1956	6.51	198	
1949	May 29, 1949	6.34	213	1957	June 7, 1957	7.94	482	
	June 12, 1949	6.83	306	1958	June 7, 1958	7.15	250	
	June 20, 1949	8.07	561	1959	June 16, 1959	6.97	201	
	0 25, 1545	3.07	301	1960	June 4, 1960	6.96	201	
1950	May 31, 1950	6.41	221	1000	1, 1000	0.50	200	
	June 7, 1950	6.31	202	1961	May 29, 1961	6.78	166	
	June 11, 1950	6.25	187	1962	June 24, 1962	7.22	247	

2290. Burnt Fork at Burntfork, Wyo.

 $\underline{Location}$.--Lat 41°02', long 110°01', in sec.14, T.12 N., R.112 W., a quarter of a mile west of Burntfork and 1 mile upstream from mouth.

Drainage area. -- 73 sq mi, approximately.

Gage.--Nonrecording. At site 200 ft downstream at datum 3.88 ft lower prior to Aug. 23, 1934. At datum 1.00 ft lower Aug. 23 to Sept. 30, 1934. Datum of gage is 7,099.19 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 120 cfs and extended above to 4,360 cfs on basis of slope-area measurement.

Remarks.--Adjudicated diversions for irrigation of about 3,000 acres substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges of Burnt Fork at Burntfork, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Aug. 10, 1930	4.7	445	1937 1938	May 15, 1937 June 5, 1938	3.30 3.82	82 182
1931	July 27, 1931	3.0	13	1939	May 5, 1939	3.06	69
1932 1933	May 22, 1932 June 1, 1933	3.82 3.96	133 157	1940	May 4, 1940	2.40	21
1935	June 14, 1935	3.44	90	1941 1942	June 18, 1941 May 26, 1942	3.50 4.18	128 245
1936	Aug. 2, 1936	9.60	4,360				

2295. Henrys Fork at Linwood, Utah

Location. --Lat 41°01'12", long 109°40'52", in center of sec.15, T.12 N., R.109 W., on left bank in Wyoming. 1.4 miles north of Wyoming-Utah State line, 3 miles upstream from State Highway 530 at Linwood, 4½ miles northeast of Manila, and 8 miles upstream from mouth.

Drainage area. -- 520 sq mi.

<u>Gage.</u>--Nonrecording and recording at several sites near highway bridge 3 miles downstream at various datums prior to Oct. 1, 1957; recording gage at present site thereafter. Altitude of gage is 6,120 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 600 cfs and extended above on basis of slope-area measurement at 6,750 cfs.

Remarks. -- Adjudicated diversions for irrigation of about 19,200 acres. One small reservoir (capacity, 80 acre-ft). Water imported from Sheep Creek by Sheep Creek upper and lower canals to irrigate lands. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 17, 1929	3.34	1,060	1946	July 25, 1946	4.20	748
1930	Aug. 13, 1930	4.8	2,590	1947	June 22, 1947	4.65	920
i				1948	May 20, 1948	3.66	712
1931	July 30, 1931	3.4	1,020	1949	June 20, 1949	3.42	1,620
1932	May 22, 1932	3.35	908	1950	Feb. 26, 1950	a3.50	· -
1933	June 3, 1933	3.45	995	li	June 7, 1950	-	1,020
1934	Apr. 8, 1934	1.88	135	11	Ì		
1935	June 14, 1935	3.60	1,060	1951	June 2, 1951	3.21	576
				1952	June 8, 1952	4.79	1,450
1936	Aug. 3, 1936	7.19	6,750	1953	June 14, 1953	4.90	2,480
1937	July 18, 1937	4.89	837	1954	July 20, 1954	3.38	884
1938	June 29, 1938		922	1955	June 9, 1955	8.47	576
3.07.0	Dec. 27, 1938	a4.66					
1939	July 31, 1939	l :	603	1956	May 27, 1956	8.17	443
2010	Dec. 22, 1939	a4.30		1957	June 8, 1957	9.65	1,240
1940	May 27, 1940	3.50	396	1958	May 26, 1958	4.30	708
3043				1959	July 15, 1959	9.42	·
1941	May 26, 1941	3.90	677	1960	Mar. 24, 1960	5.48	934
1942	May 28, 1942	3.90	1,040	2001			
1943	Aug. 11, 1943	3.35	535	1961	Sept.18, 1961	4.97	809
1944	June 27, 1944	3.92	990		Í		
1945	June 23, 1945	3.56	548				

a Backwater from ice.

2305. Green River at Flaming Gorge, near Linwood, Utah

Location. --Lat 40°57', long 109°36', in NW \$\frac{1}{4}\sec.31\), T.3 N., R.21 E., at upstream end of Horseshoe Canyon, 1 mile downstream from Flaming Gorge, 2 miles downstream from Henrys Fork, 4 miles southeast of Linwood, and 316.4 miles upstream from mouth (from river-profile map).

Drainage area. -- 14,900 sq mi, approximately.

Gage.--Recording prior to October 1928. Altitude of gage is 5,840 ft (from river-profile map). October 1928 to September 1938, no gage; discharge computed as the sum of that for Green River near Linwood and Henrys Fork near Linwood.

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Diversions for irrigation of about 224,000 acres above station. Records of discharge for period November 1923 to December 1927 furnished by Utah Power & Light Company. Annual peak discharges affected by diversions. Only annual peaks are shown.

Peak s	tages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924		-	13,500	1932		-	10,900
1925	} -	-	10,900	1933	-	-	12,000
			· ·	1934	-	-	1,800
1926	-	-	7,390	1935	-	-	12,900
1927	July 1, 1927	-	15,400	11 11		1	1 '
1928	-	-	15,200	1936	-	-	14,800
1929] -	-	8,460	1937	-	-	10,100
1930	-	-	13,100	1938	-	-	10,400
1931	-	-	3,340				

2320. Sheep Creek near Manila, Utah

Location. --Lat 40°53'10", long 109°54'10", in NE_{π}^{1} sec.28, T.2 N., R.18 E., on left bank 350 ft downstream from confluence of North and South Forks and 12 miles southwest of Manila.

Drainage area. -- 45.9 sq mi.

Gage .-- Recording. Altitude of gage is 8,680 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 250 cfs.

Remarks.--Water exported by Sheep Creek upper and lower canals above station to irrigate lands tributary to Henrys Fork. Diversions substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1943	May 2, 1943	3.87	73	1953	June 13, 1953	5.02	208
1944	May 16, 1944	5.05	472	1954	May 22, 1954	3.80	45
1945	June 22, 1945	4.01	100	1955	Apr. 25, 1955	3.86	50
1946	Apr. 27, 1946	3.78	58	1956	May 29, 1956	3.87	46
1947	May 8, 1947	5.60	694	1957	June 8, 1957	5.54	359
1948	May 19, 1948	6.05	1,020	1958	May 26, 1958	4.67	138
1949	June 19, 1949	5.48	499	1959	May 2, 1959	4.28	86
1950	May 22, 1950	4.91	259	1960	May 12, 1960	4.79	182
1951 1952	May 27, 1951 June 7, 1952	4.29 5.39	87 438	1961	May 28, 1961	4.83	178

2330. Carter Creek near Manila, Utah

Location.--Lat 40°50'20", long 109°49'50", in NW_u^1 sec.7, T.1 N., R.19 E. (unsurveyed), on right bank 2 miles upstream from Beaver Creek, 3 miles southwest of Ute Mountain Lookout Tower, and 12 miles southwest of Manila.

Drainage area. -- 19 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,600 ft (from topographic map).

 $\underline{Stage-discharge\ relation}.--Defined\ by\ current-meter\ measurements\ below\ 110\ cfs$ and extended above by logarithmic plotting.

 $\underline{\underline{\text{Remarks.}}\text{--Peaks}}$ are principally from snowmelt and are not materially affected by diversions. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1949	June 19, 1949	_	al30	1952	June 3, 1952	2.98	153		
1950	May 30, 1950	2.23	83	1953 1954	June 13, 1953 May 22, 1954	2.06 1.62	92 48		
1951	May 26, 1951	2.29	89						

a Maximum daily discharge.

2340. Carter Creek at mouth, near Manila, Utah

<u>Location</u>.--Lat 40°53'35", long 109°35'30", in SE $\frac{1}{4}$ sec.19, T.2 N., R.21 E. (unsurveyed), on left bank 600 ft upstream from mouth and 10 miles southeast of Manila.

Drainage area. -- 110 sq mi, approximately.

Gage .- - Recording. Altitude of gage is 5,880 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 600 cfs. Shifting at extremely high stage.

 $\underline{\text{Remarks.--No}}$ diversion or regulation above station. Base for partial-duration series, 400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 9, 1947 June 21, 1947	3,62 3,58	495 480	1950	June 7, 1950	2.98	412
1948	May 20, 1948	3.67	560	1951	May 28, 1951	2.71	342
1949	May 12, 1949 May 15, 1949	3.42 3.46	501 516	1952	Jan. 3, 1952 June 4, 1952	a3.11 3.74	928
	May 30, 1949 June 12, 1949	3.30 3.71	458 646	1953	June 13, 1953	2.39	422
	June 19, 1949	3,48	597	1954	May 22, 1954	1.85	234
1950	June 2, 1950	3.24	498	1955	June 10, 1955	1.40	141

a Backwater from ice.

2345. Green River near Greendale, Utah

Location. -- Lat 40°54'30", long 109°25'20", in NW 12SE 1 sec.15, T.2 N., R.22 E., on right bank half a mile downstream from Flaming Gorge Dam, 2 miles south of Dutch John, 4 miles northeast of Greendale, and 13 miles southeast of Linwood.

Drainage area. -- 15,100 sq mi, approximately.

Gage.--Recording. At site $2\frac{1}{2}$ miles upstream at different datum prior to Sept. 2, 1959. Datum of gage is 5,594.48 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 20,000 cfs.

Remarks.--Diversions and regulation above station materially affect peak flows.

Base for partial-duration series, 9,000 cfs.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	June 3, 1951 June 22, 1951	10.04 a.70	17,200 13,800	1957	June 12, 1957 July 3, 1957	10.60 7.18	19,600 10,700
1952	May 8, 1952 May 18, 1952	8.32 7.64	13,100 11,600	1958	May 29, 1958	8.17	12,800
	June 11, 1952	9.03	14,800	1959	June 21, 1959	7.31	11,000
1953	June 19, 1953	8.57	13,600	1960	May 22, 1960	10.07	9,100
1954	May 26, 1954 July 1, 1954	7.38 7.09	10,900 10,300	1961	June 2, 1961	6.38	4,660
3.055	1	'	· 1	1962	Mar. 29, 1962	12.75	15,100
1955	June 18, 1955	-	a7,000		May 12, 1962 June 25, 1962	9.93	9,270 10,800
1956	May 30, 1956	9.91	16,800	11	_,	1	

a Maximum daily discharge.

2375. Yampa River near Oak Creek, Colo.

Drainage area. -- 227 sq mi.

Gage .-- Recording. Altitude of gage is 7,100 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below E40 cfs.

Remarks.--Diversions for irrigation of about 12,000 acres above station.

Natural flow of stream affected by two diversions for irrigation to Egeria Creek in Colorado River basin and by storage in Stillwater Reservoir (capacity, 6,200 acre-ft). Peak flows are materially affected by diversiors and storage. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Mar. 30, 1943 June 2, 1943 Apr. 5, 1944 May 15, 1944	a6.17 - a5.78	280 - 183	1959 1960	Apr. 3, 1959 Apr. 7, 1959 Apr. 7, 1960	a5.35 - 6.42	405 908
1957 1958	June 16, 1957 May 26, 1958	6.49 5.63	952 604	1961 1962	Mar. 25, 1961 Apr. 3, 1961 Apr. 16, 1962	a5.86 - 7.56	412 1,400

a Backwater from ice.

2380. Oak Creek near Oak Creek, Colo.

Location -- Lat 40°14', long 107°01', in NEt sec.15, T.3 N., R.86 W., on left bank 45 miles southwest of town of Oak Creek and 16 miles upstream from mouth.

Drainage area. -- 14 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,850 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 97 cfs.

Remarks.--Diversions for irrigation of about 1,000 acres above station. One diversion imports water from Trout Creek to Oak Creek above station. Peak flows materially affected by irrigation. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953 1954 1955	May 28, 1953 May 18, 1954 May 7, 1955	3.29 2.40 3.05	56 17 59	1956 1957	May 24, 1956 May 9, 1957	3.81 4.39	61 140

2395. Yampa River at Steamboat Springs, Colo.

Location. --Lat 40°29', long 106°50', in sec.17, T.6 N., R.84 W., on right bank 30 ft downstream from First Street Bridge in Steamboat Springs and a quarter of a mile upstream from Soda Creek.

Drainage area. -- 604 sq mi.

<u>Gage.</u>--Nonrecording prior to Nov. 1, 1906; recording thereafter. At bridge a quarter of a mile upstream at datum 4.16 ft higher prior to May 8, 1905. At datum 0.44 ft higher May 8, 1905, to Oct. 31, 1906, and Mar. 8, 1910, to Sept. 11, 1934. Datum of gage is 6,695.47 ft above mean ses level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below } \underline{4.800 \text{ cfs.}}$

Remarks.--Diversions for irrigation of about 19,700 acres, two diversions for irrigation to Egeria Creek in Colorado River basin, and one diversion from Trout Creek drainage to Oak Creek drainage. Storage in Stillwater Reservoir (capacity, 6,200 acre-ft). Diversions and storage do not substantially affect peak flows. Records 1910-33 furnished by State engineer of Colorado. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	May 25, 1904	7.5	3,550	1918	May 24, 1918	4.08	3,460
1905	June 8, 1905	8.9	4,550		June 14, 1918	4.90	5,170
1906	June 13, 1906	8.9	5,040	1919	May 2, 1919	4.20	3,660
1910	May 30, 1910	3.85	3,120	1920	May 5, 1920 June 8, 1920	4.53 5.53	3,370 4,950
1911	June 8, 1911	4.70	2,860	1921	June 14, 1921	6.64	6,820
1912	June 4, 1912 June 24, 1912	6.00 4.95	4,520 3,200	1922	May 28, 1922 June 9, 1922	4.40 4.29	3,220 3,080
1913	May 25, 1913	-	2,700	1923	May 27, 1923 June 13, 1923	4.78 5.04	3,560 3,900
1914	June 2, 1914 June 11, 1914 June 14, 1914	6.15 4.80 5.28	6,300 3,220 4,130	1924	May 26, 1924 June 14, 1924	4.38 4.98	3,080 3,820
1915	June 11, 1915	3.55	2,820	1925	May 28, 1925	4.40	2,900
1916	June 9, 1916	3.90	3,430	1926	May 28, 1926	5.29	4,530
1917	May 20, 1917 June 22, 1917	4.27 5.20	3,840 5,860	1927	May 21, 1927 June 8, 1927	5.31 5.01	4,160 3,770

Peak stages and discharges of Yampa River at Steamboat Springs, Colo. -- Continued

		0	Tompo Harres		meene springs,		5411444
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	May 11, 1928 May 30, 1928	5.12 6.00	3,930 5,070	1947	May 9, 1947	4.81	2,620
1929	May 25, 1929	4.93	3,680	1948	May 21, 1948	5.93	4,210
	June 9, 1929	5.46	4,380	1949	May 30, 1949 June 12, 1949	4.98 5.41	3,010 3,520
1930	May 30, 1930	-	3,600		June 18, 1949	5.54	3,680
1931	May 16, 1931	-	2,700	1950	June 6, 1950	4.99	2,920
1932	May 23, 1932	-	3,550	1951	May 29, 1951	5.43	3,750
1933	June 12, 1933	5.5 2	4,640	1952	June 4, 1952	6.83	5,740
1934	May 11, 1934	3.12	1,460	1953	May 29, 1953 June 13, 1953	5.13 6.08	3,210 4,620
1935	June 13, 1935	5.60	4,150	1954	May 19, 1954	3.93	1,870
1936	Apr. 21, 1936 May 6, 1936	4.87 4.40	3,130 2,530	1955		1	-
	May 29, 1936	5.48	4,080		May 13, 1955	4.55	2,580
1937	May 30, 1937	4.77	2,980	1956	May 23, 1956	5.60	3,750
		ľ		1957	May 9, 1957	5.24	3,540
1938	May 16, 1938	4.37	2,450		June 7, 1957	6.53	5,300
	June 5, 1938	5,60	4,340		June 13, 1957	6.43	5,140
	}			ll .	June 21, 1957	5.10	3,170
1939	May 19, 1939	5.05	2,960		June 29, 1957	6.39	5,080
1940	May 31, 1940	4.94	3,220		July 7, 1957	5.43	3,640
			-	1958	May 28, 1958	6.02	4,530
1941	May 14, 1941	5.32	3,770	l	June 7, 1958	5.59	3,880
	May 26, 1941	4.84	3,080	1	1		'
				1959	June 8, 1959	5.27	3,080
1942	June 6, 1942	5,20	3,300	1960	June 4, 1960	5.08	3,140
1943	May 30, 1943	5.10	3,300	1961	-	1	1
1944	May 31, 1944	4.88	3,020	1901	May 29, 1961	4.74	2,780
1944	June 9, 1944	5.27	3,400	1962	Ann 20 1002	5,50	3,820
	June 9, 1944	3.27	3,400	1962	Apr. 20, 1962 May 13, 1962	5.79	4,300
1945	June 6, 1945	4.86	2,830		May 13, 1962 June 13, 1962	4.92	3,030
1946	June 7, 1946	4.92	3,190				

2405. Elk River at Hinman Park, Colo.

 $\underline{Location}$.--Lat 40°45'20", long 106°48'40", in sec.9, T.9 N., R.84 W., at Finman Park, a quarter of a mile upstream from South Fork.

Drainage area. -- 61 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,750 ft (from topographic map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined}$ by current-meter measurements below $1,200~\text{cfs}\,.$

 $\underline{\underline{\text{Remarks.}}\text{--No}}$ diversion above station. Records furnished by State engineer of Colorado. Base for partial-duration series, 1,000 cfs.

	Tear bugges and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1913	May 24, 1913	3.30	1,250	1916	June 10, 1916 June 18, 1916	3.10 2.70	1,420 1,120				
1914	June 3, 1914 June 14, 1914	3.00	1,240 1,360	1917	June 1917	-	2,000				
1915	June 11, 1915	2.40	950	1918	June 12, 1918	3.90	2,040				

2410. Elk River at Clark, Colo. (Published as "near Clark" 1910-22)

Location. --Lat 40°43'00", long 106°54'50", in sec.28, T.9 N., R.85 W., on left bank 30 ft downstream from bridge on State Highway 129 in Clark and 1 mile upstream from Cottonwood Gulch.

Drainage area .-- 206 sq mi.

Gage. -- Nonrecording prior to Apr. 23, 1930; recording thereafter. At datum 0.15 ft lower prior to Sept. 28, 1934. Datum of gage is 7,267.75 ft above mean sea level (State Highway bench mark).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below }3,000~\text{cfs}.$

Remarks. -- Diversions for irrigation of 690 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1910-22, 1930-33 furnished by State engineer of Colorado. Base for partial-duration series, 1,900 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 6, 9, 1912	-	a4,470	1946	June 6, 1946	4.28	2,300
1921	June 7,12,15, 1921	7.10	3,920	1947	May 4, 1947 May 28, 1947	4.98 3.97	3,170 1,910
1922	May 26, 1922	7.0	3,820		June 9, 1947 June 22, 1947	4.25 4.38	2,220 2,350
1930	Apr. 25, 1930 May 29, 1930 June 12, 1930	4.44 4.62 4.48	1,920 2,070 1,950	1948	May 21, 1948 May 28, 1948 June 3, 1948	4.88 4.32 4.42	2,860 2,170 2,280
1931	May 18, 1931	4.30	1,810	3040	,		
1932	June 16,23,1932	5.00	2,380	1949	May 4, 1949 May 12, 1949 May 29, 1949	4.00 4.25 4.29	1,940 2,220 2,270
1933	May 22, 1933 June 2, 1933	4.68 5.50	2,110 2,780		May 29, 1949 June 12, 1949 June 18, 1949	4.29 4.29 4.78	2,270 2,270 2,860
1934	May 8, 1934	3,90	1,500	1950	May 24, 1950 June 6, 1950	4.36 4.68	2,420 2,860
1935	May 25, 1935 June 13, 1935	4.16 5.00	2,350 3,360		June 16, 1950 June 25, 1950	4.67 4.07	2,840 2,100
1936	May 5, 1936	4.65	2,990	1951	May 28, 1951 June 19, 1951	4.38 4.15	2,400 2,140
1937	May 10, 1937 May 18, 1937 June 22, 1937	4.78 4.85 4.07	3,110 3,200 2,200	1952	May 5, 1952 May 14, 1952 June 4, 1952	4.96 4.33 5.75	3,090 2,260 3,960
1938	May 1, 1938 May 16, 1938 May 28, 1938 June 22, 1938	4.91 5.50 4.87 4.01	3,010 3,760 2,960 1,950	1953	May 28, 1953 June 13, 1953	4.22 4.97	2,130 3,010
1939	May 19, 1939	4.22	1,860	1954	May 21, 1954	4.05	1,890
1940				1955	June 8, 1955	3.82	1,740
1940	May 13, 1940 June 2, 1940	4.63 4.16	2,680 2,120	1956	May 24, 1956 June 2, 1956	4.63 4.91	2,5 4 0 2,790
1941	May 13, 1941 May 18, 1941 May 27, 1941	4.73 4.26 4.23	2,720 2,070 2,070	1957	May 10, 1957 June 7, 1957 June 13, 1957	4.37 5.47 5.52	2,290 3,600 3,800
1942	May 26, 1942 June 10, 1942 June 18, 1942	4.76 4.24 3.97	2,830 2,140 1,930		June 21, 1957 June 29, 1957	4.36 5.18	2,130 3,090
1943	May 4, 1943 June 1, 1943 June 25, 1943	4.06 4.92 4.14	2,080 3,100 2,090	1958	May 12, 1958 May 28, 1958 June 7, 1958	4.55 4.78 4.72	2,600 2,800 2,800
1944	May 16, 1944	3.95	2,120	1959	June 8, 1959	4.04	1,890
	May 30, 1944 June 9, 1944	4.17 4.21	2,390 2,280	1960	May 13, 1960 June 3, 1960	4.06 4.09	1,990 2,000
1945	May 11, 1945 June 5, 1945	4.80 4.81	2,880	1961	May 29, 1961	3.84	1,720
	June 13, 1945 June 28, 1945 July 11, 1945	4.01 4.08 4.03	2,860 1,910 1,920 2,010	1962	Apr. 24, 1962 May 11, 1962 June 14, 1962	4.19 4.83 4.02	2,060 2,880 1,940
a M	aximum daily dis	charge.					

a Maximum daily discharge.

2425. Elk River near Trull, Colo.

<u>Location</u>.-Lat 40°30'30", long 106°57'30", in sec.5, T.6 N., R.85 W., $2\frac{1}{2}$ miles upstream from mouth and $2\frac{1}{2}$ miles southwest of Trull.

Drainage area. -- 415 sq mi.

Gage.--Nonrecording prior to Sept. 20, 1919, at datum 3.54 ft lower; recording thereafter. Altitude of gage is 6,590 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 4,500 cfs.

Remarks.--Diversions for irrigation of about 7,500 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1910-27 furnished by State engineer of Colorado. Base for partial-duration series, 3,500 cfs.

Peak stages and discharges

Water year	Date	,Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	May 24, 1904	9.75	3,710	1922	May 29, 1922 June 10, 1922	5.56 5.52	4,150 4,080
1905	June 5, 1905	9.90	3,940	1923	May 11, 1923	5.19	3,520
1906	May 29, 1906	10.05	4,380	1323	May 25, 1923	5.60	4,220
1917	May 19, June 10, 12, 16, 1917	10.40	4,460	1924	June 15, 1924	5.27	3,730
1920	May 26, 1920	6.30	5,520	1925	May 31, 1925	4.71	2,890
	June 9, 1920	6.10	5,140	1926	May 26, 1926	5,18	3,590
1921	May 7, 1921 May 18, 1921 June 15, 1921	5.72 5.71 6.35	4,420 4,410 5,530	1927	May 1, 1927 May 18, 1927 June 27, 1927	5.34 5.60 5.14	3,840 4,270 3,530

2430. Trout Creek near Phippsburg, Colo.

<u>Location</u>.--Lat 40°10', long 107°08', in SW_{4}^{1} sec.2, T.2 N., R.87 W., on right bank 5 ft downstream from U.S. Forest Service road bridge, 11 miles southwest of Phippsburg, 12 miles southwest of Oak Creek, and 28 miles upstream from mouth.

Drainage area. -- 16 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 9,680 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 140 cfs.

Remarks. -- Regulation since April 1955 by Sheriff Reservoir (capacity, about 900 acre-ft) 1 mile above station. Rich ditch diverts water above station from Trout Creek basin to Oak Creek basin. Peak flows materially affected by regulation and diversion. Peaks are principally from snowmelt. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1954 1955	May 21, 1954 June 13, 1955	3,75 3,48	226 135	1957 1958	June 30, 1957 May 28, 1958	6.08 4.04	565 286
1956	May 23, 1956	4.05	565				

2441. Fish Creek near Milner, Colo.

Location.--Lat 40°20'10", long 107°08'20", in $NW_{\overline{k}}^1$ sec.11, T.4 N., R.87 W., on left bank 200 ft downstream from highway bridge, a quarter of a mile upstream from Coyote Creek, and 12 miles southwest of Milner.

Drainage area. -- 34.5 sq mi.

<u>Gage.</u>--Recording. At site 200 ft upstream prior to Aug. 15, 1958. At different datum prior to Apr. 8, 1958, and at datum 3.14 ft higher Apr. 8 to Aug. 14, 1958. Altitude of gage is 6,930 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 180 cfs.

Remarks. -- Diversions above station for irrigation do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 180 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 6, 1956 May 24, 1956	4.83 4.74	208 195	1959	May 13, 1959	4.71	103
	-			1960	Mar. 27, 1960	5.63	255
1957	May 9, 1957	4.97	219		Apr. 10, 1960	5.38	215
	June 2, 1957	5.18	248	1	_		
	June 15, 1957	5,29	239	1961	May 11, 1961	4.61	114
1958	May 7, 1958	4.40	204	1962	Apr. 15, 1962	5.58	199
1959	Mar. 22, 1959	a5.59	• -		Apr. 27, 1962 May 12, 1962	5.53 5.76	202 23 4

a Backwater from ice.

2450. Elkhead Creek near Elkhead, Colo.

Location. --Lat 40°40'15", long 107°17'10", in $NW_{\overline{k}}^{1}$ sec.8, T.8 N., R.88 W., on right bank 0.2 mile upstream from North Fork Elkhead Creek, $4\frac{1}{2}$ miles northwest of Elkhead, and 12 miles north of Hayden.

Drainage area. -- 64.2 sq mi.

Gage .-- Recording. Altitude of gage is 6,830 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 720 cfs.

Remarks.--No diversions above station. Peaks are principally from snowmelt.

Base for partial-duration series, 800 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953 1954	May 20, 1953	6.25	970	1958	May 12, 1958 May 19, 1958	6.53 5.94	1,120 886
1954	Apr. 24, 1954 Apr. 26, 1955	5.22 6.15	562 930	1959	May 7, 1959	5.11	578
1956	Apr. 26, 1956	5.80	930 810	1960	Apr. 21, 1960	5.81	834
	May 6, 1956	6.07	898	1961	May 11, 1961	4.93	493
1957	May 10, 1957	6.57	1,100	1962	Apr. 24, 1962 May 6, 1962	6.43 6.46	1,020 1,030
1958	May 7, 1958	5.82	838				

2470. Fortification Creek at Craig, Colo.

Location. --Lat 40°30'50", long 107°32'30", in SE $\frac{1}{4}$ sec.31, T.7 N., R.90 W., at Craig, 1 mile upstream from mouth.

Drainage area. -- 258 sq mi.

Gage. -- Nonrecording prior to Oct. 1, 1918, at different datum; recording after Sept. 3, 1943. Datum of gage is 6,178.24 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 650 cfs.

Bankfull stage .-- 11 ft.

Remarks.--Diversions for irrigation of about 2,500 acres. Diversions do rot substantially affect peak flows. Peaks are principally from snowmelt. Records for 1909-18 furnished by State engineer of Colorado. Base for partial-duration series, 350 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	Apr. 11, 1917	10.7	830	1945	May 26, 1945	6.93	407
			ľ	i i	June 2, 1945	8.80	670
1944	May 22, 1944	9.66	744	ŀ			
	May 31, 1944	7.52	430	1946	Apr. 27, 1946	6.78	333
	June 5, 1944	7.15	380				
	_			1947	Mar. 23, 1947	10.44	841
1945	Apr. 8, 1945	8.04	562		Mar. 28, 1947	8.26	557
	Apr. 22, 1945	7.42	475	[Apr. 23, 1947	6.98	387
	May 7, 1945	9.15	722	ii	May 5, 1947	s.87	650

2486. East Fork of Williams Fork above Willow Creek, Colo.

Location. --Lat 40°15'40", long 107°17'35", in NE $\frac{1}{4}$ sec.5, T.3 N., R.88 W., on right bank $3\frac{1}{2}$ miles south of Willow Creek store, 3.8 miles upstream from Willow Creek, and 16 miles south of Hayden.

Drainage area. -- 108 sq mi.

Gage. -- Recording. Altitude of gage is 7,100 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 960 cfs.

Remarks.--Diversions for irrigation of about 800 acres above station do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 450 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1957	May 10, 1957 June 6, 1957	5.62	590 1,400	1960	May 13, 1960 May 23, 1960	5.90 5.52	722 520
	June 25, 1957 July 17, 1957	6,22	1,500 964		June 3, 1960	6.18	936
1958	,			1961	May 11, 1961	5.63	602
1956	May 7, 1958 May 11, 1958	5.56 5.54	746 734		May 22, 1961 May 30, 1961	5.82 6.00	740 866
	May 29, 1958 June 3, 1958	-	1,300 1,100		June 9, 1961	5.74	692
	June 6, 1958	-	900	1962	Apr. 24, 1962	6.00	789
1959	May 14, 1959 May 29, 1959 June 8, 1959 June 27, 1959	5.90 5.65 5.95 5.30	635 535 710 452		May 12, 1962 May 20, 1962 June 6, 1962 June 13, 1962 June 21, 1962	6.85 5.77 5.78 6.08 5.77	1,450 629 636 846 629

2490. East Fork of Williams Fork near Pagoda, Colo.

<u>Location</u>.--Lat 40°18'45", long 107°19'15", in SW_{π}^{1} sec.18, T.4 N., R.88 W., on right bank 20 ft downstream from private road bridge, half a mile upstream from Dowden Gulch, $1\frac{1}{n}$ miles downstream from Willow Creek, and $5\frac{1}{2}$ miles southeast of Pagoda.

Drainage area. -- 150 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,830 ft (from topographic map).

 $\frac{\text{Stage-discharge relation}}{1,100 \text{ cfs.}}.\text{--Defined by current-meter measurements below}$

Remarks.--Diversions for irrigation of about 900 acres above station do not materially affect peak flows. Peaks are principally from showmelt. Base for partial-duration series, 500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 21, 1954	3.76	578	1958	June 3, 1958 June 6, 1958	3.85 3.71	1,140 962
1955	May 2, 1955	3.51	525	lį.	,		
	May 14, 1955	3.85	680	1959	May 14, 1959	3.44	730
	June 8, 1955	3.72	630	11	May 29, 1959	3.27	576
		ļ	ļ	ĮĮ.	June 7, 1959	3.47	774
1956	May 8, 1956	3.72	682	ĺ			
	May 24, 1956	4.09	923	1960	May 12, 1960	3.44	824
	June 2, 1956	4.10	930		May 23, 1960	3.24	620
				1	June 2, 1960	3.40	780
1957	May 9, 1957	3.80	695				
	May 19, 1957	3.48	505	1961	May 11, 1961	3.15	540
	June 6, 1957	4.82	1,520	1	May 30, 1961	3.38	758
	June 26, 1957	4.62	1,620		June 9, 1961	3,26	634
	July 18, 1957	3.84	916				
	l '			1962	Apr. 20, 1962	3.50	912
1958	May 7, 1958	3.60	840	l .	May 12, 1962	3.87	1,340
	May 12, 1958	3.60	840		June 13, 1962	3.36	736
	May 29, 1958	4.02	1,360	1	June 20, 1962	3.15	532

Peak stores and discharges

2495. Williams Fork at Hamilton, Colo. (Published as "Williams River," except in Water-Supply Paper 618)

Location. -- Lat 40°22'10", long 107°36'30", in sec.21, T.5 N., R.91 W., at highway bridge at Hamilton, a quarter of a mile upstream from Morapos Creek.

Drainage area. -- 341 sq mi.

Gage. -- Nonrecording. At datum 0.18 ft higher prior to Nov. 1, 1906. Altitude of gage is 6,230 ft (from topographic map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below} \\ \underline{1,500 \text{ cfs.}}$

Remarks. --Diversions for irrigation of about 4,500 acres. Small ditch imports water from nearby stream above station. Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1909-27 furnished by State engineer of Colorado. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1904 1905	May 19, 1904 May 24, 1905	6.60 7.15	1,670 2,070	1921 1922 1923	May 17,30,1921 May 26,1922 May 21,1923	8.4 7.9 7.5	1,950 1,730 1,750				
1906	May 29, 1906	8.30	2,850	1924	May 18, 1924	6.4	1,400				
1917	June 10, 1917	10.3	3,400	1							

2500. Milk Creek near Thornburg, Colo.

<u>Location</u>.--Lat 40°12', long 107°44', in $NE_{\eta}^{\frac{1}{2}}$ sec.32, T.3 N., R.92 W., on right bank $2\frac{1}{2}$ miles northwest of Thornburg and 3 miles upstream from Little Creek.

Drainage area. -- 65 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,450 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 330 cfs.

Remarks. -- Diversions for irrigation of about 2,000 acres do not materially affect peak flows. Base for partial-duration series, 250 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	May 22, 1953 May 29, 1953	4.72 4.82	283 296	1958	May 7, 1958 May 12, 1958 May 19, 1958	4.50 4.54 4.37	345 354 319
1954	May 10, 1954	3.77	154		May 26, 1958	4.27	299
1955	May 15, 1955	4,43	214	1959	May 14, 1959	3.52	141
1956	May 8, 1956	4.28	218	1960	May 13, 1960	3.95	235
1957	May 10, 1957 June 1, 1957	5.36 5.52	491 482	1961	May 12, 1961	3.89	217
1958	Apr. 14, 1958	a5.28		1962	Apr. 25, 1962 May 9, 1962	4.30 4.46	350 370

a Backwater from beaver dam.

2510. Yampa River near Maybell, Colo.

Location.--Lat 40°30'10", long 108°01'45", in NW $_{1}^{1}$ sec.2, T.6 N., R.95 W., on left bank 100 ft downstream from bridge on U.S. Highway 40, 2 miles downstream from Lay Creek, and 3 miles east of Maybell.

Drainage area. -- 3,410 sq mi, approximately.

Gage.--Nonrecording prior to Nov. 4, 1917; recording thereafter. At Thornburg Bridge 14 miles downstream at different datum prior to Apr. 24, 1916. At Fraker Ford Bridge 700 ft downstream Apr. 24, 1916, to Mar. 8, 1937. At datum 0.92 ft higher Apr. 24, 1916, to Sept. 30, 1932. Datum of gage is 5,900.23 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 14,000 cfs.

Remarks.--Diversions for irrigation of about 65,000 acres, transbasin diversions and numerous storage reservoirs above station. Diversions and regulation substantially affect peak flows. Peaks are principally from snowmelt. Records for 1917-33 furnished by State engineer of Colorado. Base for partial-duration series, 7,000 cfs. Only annual peaks are shown prior to 1954.

Peak stages and discharges

Date	Gage height (feet)	Discharge (cfs)
May 19, 1931	4.67	6,500
May 24, 1932		12,100
June 3, 1933	7.72	11,200
May 11, 1934	4.05	4,080
June 16, 1935	6.96	9,870
1		
May 18, 1936	7.09	10,600
May 17, 1937	7.34	10,000
May 19, 1938	8.62	12,100
	6.99	7,860
	7.64	9,170
May 15, 1941	8.50	11,700
		9,930
		9,280
		9,080
		10,900
		,
Apr. 29, 1946	6.41	6,850
		12,400
	May 19, 1931 May 24, 1932 June 3, 1933 May 11, 1934 June 16, 1935 May 18, 1936 May 17, 1937 May 19, 1938 May 7, 1938	Date height (feet) May 19, 1931 4.67 May 24, 1932 7.68 June 3, 1933 7.72 May 11, 1934 4.05 June 16, 1935 6.96 May 18, 1936 7.09 May 17, 1937 7.34 May 19, 1938 8.62 May 7, 1939 6.99 May 7, 1939 7.64 May 15, 1941 8.50 May 27, 1942 7.65 June 3, 1943 7.70 May 25, 1944 7.52 May 13, 1945 8.20 Apr. 29, 1946 6.41

Water

year

1948

1949

1950

1951

1952

1953

1954

1955

1956

1957

Gage Gage Discharge Discharge Water Date height Date height (cfs) vear (cfs) (feet) (feet) 15,700 12,800 May 22, 1948 June 19, 1949 8.37 11,300 1957 June 9, 1957 1, 1957 10.25 7.82 9,730 8,210 July 9.23 May 25, 1950 7.29 7.85 1958 9, 1958 May 9,440 May 30, 1951 June 6, 1952 14, 1958 30, 1958 9, 1958 8.870 10,000 12,200 9,630 7.49 May May 8.10 June 6, 1952 June 15, 1953 9.55 13,800 8.96 8.14 June 7.93 May 23, 1954 6.05 5,480 1959 June 10, 1959 6.77 6,690

1960

1961

1962

Apr. 12, 1960 May 15, 1960

May 31, 1961

Apr. 27, 1962

14, 1962

7,380

8,000

6,350

11,200

11,500

6.97

7.25

6.55

8.58

8.70

Peak stages and discharges of Yampa River near Maybell, Colo. -- Continued

a Backwater from ice.

May

Mar. 13, 1955 May 16, 1955

May 10, 1956 May 25, 1956

11, 1957

a6.95

6.82

7.27

8.08

9.17

2515. Middle Fork Little Snake River near Battle Creek, Colo.

Location. -- Lat 40°59', long 107°03', in sec.21, T.12 N., R.86 W., a quarter of a mile upstream from North Fork and 10 miles east of Battle Creek.

Drainage area. -- 120 sq mi.

Gage. -- Recording. Altitude of gage is 7,000 ft (from river-profile map).

7,000

7,930

9,870

12,700

Stage-discharge relation. -- Defined by current-meter measurements below 1,500 cfs.

Remarks.--Diversions for irrigation of about 500 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records furnished by State engineer of Colorado. Base for partial-duration series, 850 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 25, 1912 May 30, 1912	6.13 5.90	1,970 1,770	1919	May 5, 1919	3.68	861
1913	May 10, 1913	4,30	1,090	1920	May 9, 1920 May 25, 1920 June 7, 1920	3.80 7.7 4.90	952 4,400 1,670
1915	Apr. 29, 1915	3.80	835	1001			1
1916	May 9, 1916	5.45	1,720	1921	May 6, 1921 May 18, 1921 May 27, 1921	3.60 4.82 6.55	850 1,610 3,170
1917	June 17, 1917	-	2,600		June 6, 1921	5.60	2,250
1918	May 7, 1918 May 15, 1918	4.45 • 4.60	1,300 1,380	1922	May 29, 1922	5.15	1,800

2518. North Fork Little Snake River near Encampment, Wyo.

<u>Location</u>.--Lat $41\,^\circ 03\,^\circ 00^{\circ}$, long $106\,^\circ 57\,^\circ 30^{\circ}$, in $SW^1_{\overline{u}}$ sec. 33, T.13 N., R.85 W., on right bank 200 ft upstream from Harrison Creek and 14 miles southwest of Encampment.

Drainage area. -- 9.64 sq mi.

Gage .--Recording. Altitude of gage is 8,300 ft (from topographic map)

Stage-discharge relation. -- Defined by current-meter measurements below 260 cfs.

Remarks. -- No diversions above station. Peak flows are principally from snow-melt. Base for partial-duration series, 150 cfs.

Peak stages and discharges of North Fork Little Snake River near Encampment, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	June 7, 1957 June 20, 1957 June 29, 1957	3.75 2.95 3.31	515 275 383	1959	May 16, 1959 June 7, 1959	2.53 3.02	152 276
	Aug. 15, 1957	2.71	209	1960	June 3, 1960	2.98	284
1958	May 7, 1958 May 12, 1958	-	170 230	1961	May 27, 1961	2.87	283
	May 29, 1958 June 3, 1958 June 7, 1958	3.48 3.28 3.16	410 350 314	1962	May 12, 1962 June 13, 1962 June 30, 1962	2.65 2.71 3.18	195 209 344

2519. North Fork Little Snake River near Slater, Colo.

<u>Location</u>.--Lat 41°00'55", long 107°01'20", in NE_u^1 sec.14, T.12 N., R.86 W., in Wyoming, on right bank at downstream side of road bridge, 1 mile upstream from West Branch of North Fork, 3 miles upstream from mouth, and 19 miles east of Slater.

Drainage area .-- 29.3 sq mi.

Gage. -- Recording. Altitude of gage is 7,350 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements below 390 cfs.

Remarks. -- No diversions above station. Peak flows are principally from snow-melt. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 8, 1956 (a)	2.6 3.2	312 548	1959	May 16, 1959 June 7, 1959	2.44 2.65	296 400
1957	May 9, 1957 June 7, 1957 June 20, 1957	2.24 3.17 2.69	223 628 396	1960	May 13, 1960 June 3, 1960	2.65 2.60	385 365
1958	June 29, 1957 May 7, 1958	2.77	458 276	1961	May 27, 1961	2.72	358
	May 12, 1958 May 29, 1958	2.51 3.02	328 570	1962	May 12, 1962 May 12, 1962	2.67 2.50	428 337

a Occurred during period May 24 to June 2, 1956.

2525. South Fork Little Snake River near Battle Creek, Colo.

Location. --Lat 40°59', long 107°03', in sec.28, T.12 N., R.86 W., 1 mile upstream from mouth and 10 miles east of Battle Creek.

Drainage area. -- 46 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,060 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements below 240 cfs.

Remarks.--Diversions for irrigation of 440 acres do not substantially affect peak flows. Peak flows are principally from snowmelt. Records furnished by State engineer of Colorado. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 9, 1912 May 21, 1912	2.05 2.70	200 330	1916	Apr. 28, 1916 May 11, 1916	2.45 2.62	238 280
1913	Apr. 19, 1913 Apr. 21, 1913 Apr. 29, 1913	2.15 3.90 2.07	218 650 200	1917 1918	June 17, 1917 May 5, 1918	2.80 2.00	197 210
1914	May 23, 1914	2.35	270	1919	Apr. 23, 1919 June 5, 1919	1.93 2.70	225 580
1915	June 6, 1915	1.87	108	1920	May 9, 1920	3.00	760

2530. Little Snake River near Slater, Colo.

Location. --Lat 41°00', long 107°09', in SW_{u}^{1} sec.15, T.12 N., R.87 W., on left bank just downstream from highway bridge at Focus Ranch, a quarter of a mile downstream from Spring Creek, and 11 miles east of Slater.

Drainage area. -- 285 sq mi.

<u>Gage</u>.--Recording. Datum of gage is 6,831.00 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined}$ by current-meter measurements below 2,300 cfs.

Bankfull stage . -- 7 ft.

Remarks.--Diversion for irrigation of about 2,000 acres does rot substantially affect peak flows. Peaks are principally from snowmelt. Fase for partial-duration series, 1,600 cfs.

Peak st	ages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 30, 1943 June 1, 1943	6.94 8.22	1,670 3,140	1954	May 28, 1954	6.04	1,020
1944	May 17, 1944	6.93	1,660	1955	May 7, 1955	6.63	1,620
	May 23, 1944 May 31, 1944	7.31 7.29	2,070 2,050	1956	May 8, 1956 May 24, 1956	7.09 7.36	2,050 2,330
1945	May 11, 1945 May 18, 1945	7.43 7.02	2,200 1,750	1957	May 10, 1957	7.00	1.920
	June 5, 1945	7.78	2,620	1937	June 7, 1957 June 13, 1957	8.27 7.09	3,230 2,010
1946	Apr. 27, 1946	6.81	1,540		June 21, 1957 June 28, 1957	6.92 6.89	1,840 1,810
1947	May 9, 1947	7.64	2,450	3.050	•		-
1951	May 28, 1951	7.26	2,050	1958	May 24, 1958	8.17	3,120
1952	Apr. 28, 1952	6.90	1,820	1959	May 13, 1959	6.54	1,420
1302	May 5, 1952 May 14, 1952	7.86 7.42	2,780 2,340	1960	May 13, 1960	6.94	1,860
	May 20, 1952 June 4, 1952	6.72 8.25	1,640	1961	May 25, 1961	6.46	1,350
3.55	-		,	1962	Apr. 24, 1962	7.35	2,230
1953	May 28, 1953 June 12, 1953	6.75 7.13	1,640 2,050		May 11, 1962	7.99	2,920

2534. Battle Creek near Encampment, Wyo.

Location. --Lat 41°08'00", long 107°03'50", in $NE_{4}^{\frac{1}{4}}$ sec.4, T.13 N., R.86 W., on right bank at sheep bridge, 1 mile downstream from Haskins Creek, 8 miles upstream from Haggarty Creek, and 15 miles west of Encampment.

Drainage area. -- 12.8 sq mi.

Gage .-- Recording. Altitude of gage is 8,375 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 320 cfs.

Remarks.--No diversions above station. Peak flows are principally from snow-melt. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 8, 1956 May 24, 1956	2.30 3.3	126 340	1959	June 8, 1959	3.01	232
)		1	1960	May 13, 1960	2.78	186
1957	June 7, 1957	3.75	520		May 23, 1960	2.80	190
	June 20, 1957	3.02	244		June 3, 1960	3.20	300
	June 29, 1957	3.57	440		·		
	July 7, 1957	3.12	294	1961	May 29, 1961	2.84	227
1	July 12, 1957	2.57	163	Į į			
_		1		1962	Apr. 19, 1962	a3.20	-
1958	May 29, 1958	4.18	670	ļ i	May 12, 1962	3.08	282
				ļ	June 14, 1962	2.87	227
1959	May 16, 1959	2,52	132	('			
a Ba	ckwater from ice	•					

2535. Battle Creek near Slater, Colo.

Location .--Lat 41°00'10", long 107°14'20", in NW_{h}^{1} sec.14, T.12 N., R.88 W. (Colorado), 10 ft upstream from bridge on Colorado Highway 129 at Wyoming-Colorado State line, a quarter of a mile upstream from mouth, and 7 miles east of Slater.

Drainage area .-- 85.3 sq mi.

Gage.--Recording. At datum 1.00 ft higher prior to Oct. 16, 1944. Datum of gage is 6,696.10 ft above mean sea level, adjustment of 1912.

Stage-discharge relation. -- Defined by current-meter measurements below 520 cfs.

Bankfull stage .-- 4 ft.

Remarks.--Diversions for irrigation of 300 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 750 cfs.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 1, 1943	4.64	967	1948	May 21, 1948	3.43	1,160
1944	May 22, 1944 May 30, 1944 June 9, 1944	3.98 -3.99 2.94	S24 830 844	1949	May 17, 1949 May 29, 1949 June 12, 1949	2.90 2.94 3.40	785 805 1,130
1945	May 12, 1945 June 4, 1945	3.97 3.57	8 44 776	1950	May 22, 1950 June 1, 1950 June 6, 1950	2.78 2.99 2.95	828 905 860
1946	June 6, 1946	3.14	717		_		
1947	May 8, 1947	3.34	876	1951	May 28, 1951	2.82	844

2545. Slater Fork at Baxter Ranch, near Slater, Colo. (Published as Slater Creek at Baxter Ranch, 1912-13)

Location.--Lat 40°53', long 107°20', in SW_{ψ}^1 sec.24, T.11 N., R.89 W., at Baxter Ranch,10 miles south of Slater.

Drainage area. -- 80 sq mi, approximately.

 $\underline{\text{Gage.--Recording}}$ except for nonrecording at same site and datum parts of 1914, $\overline{1917}$, and 1920. Altitude of gage is 7,070 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 520 cfs.

Remarks.--No diversion above station. Peaks are principally from snowmelt.

Records furnished by State engineer of Colorado. Base for partial-duration series, 440 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 20, 1912 June 7, 1912	4.50 3.45	890 49 2	1917	June 9, 1917	4.80	1,070
1913	May 3, 1913	3.20	435	1918	June 10, 1918	3.55	490
1915	May 13, 1915	3.60	545	1919	May 24, 1919	3.40	432
	June 1, 1915 May 6, 1915	3.59 3.40	542 475	1920	June 1, 1920	3.9	630 494
1916	Apr. 27, 1916 May 5, 1916	3.65 3.70	527 5 4 6	1922	May 9, 1922 May 24, 1922	4.15	745

2550. Slater Fork near Slater, Colo. (Published as "Slater Creek" 1910-12)

Location.--Lat 40°59', long 107°23', in $SW^{\frac{1}{4}}$ sec.21, T.12 N., F.89 W., on right bank 25 ft downstream from highway bridge, 1 mile upstream from mouth, and $1\frac{1}{2}$ miles south of Slater.

Drainage area. -- 161 sq mi.

 $\frac{\text{Gage}_1\text{--Nonrecording prior to May 7, 1932; recording thereafter. At site }{1\frac{1}{2}\text{ miles upstream at different datum prior to May 26, 1912. Altitude of gage is 6,600 ft (from river-profile map).}$

Stage-discharge relation. -- Defined by current-meter measurements below 800 cfs.

Remarks.--Diversions for irrigation of about 500 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records prior to 1934 furnished by State engineer of Colorado. Base for partial-duration series, 430 cfs.

1912 May 19, 1912 5.00 1,700 1933 May 22, 1933 7.60 630 May 4, 1949 8 1934 Apr. 21, 1934 3.76 143 1935 May 14, 1935 5.80 566 May 26, 1935 7.27 926 May 26, 1935 7.27 926 May 14, 1935 6.67 773 May 25, 1950 7 May 21, 1950 6 May 25, 1950 7 May 21, 1950 6 May 27, 1950 6 May 28, 1950 7 May 27, 1950 7 May 27, 1950 7 May 27, 1950 7 May 31, 1950 6	
1912 May 19, 1912 5.00 1,700 1933 May 22, 1933 7.60 630 June 2, 1933 7.38 595 1934 Apr. 21, 1934 3.76 143 1935 May 14, 1935 5.80 566 May 26, 1935 7.27 926 June 14, 1935 6.67 773 May 25, 1950 7 May 18, 1949 7 June 12, 1949 6 Apr. 29, 1949 7 June 12, 1949 6 Apr. 29, 1949 7 June 12, 1950 6 May 26, 1955 7.27 926 May 26, 1955 7 May 27, 1950 7 May 27, 1950 7 May 27, 1950 7 May 31, 1950 6	
1912 May 19, 1912 5.00 1,700 1933 May 22, 1933 7.60 630 June 2, 1933 7.38 595 1934 Apr. 21, 1934 3.76 143 1935 May 14, 1935 5.80 566 May 26, 1935 7.27 926 June 14, 1935 6.67 773 May 25, 1950 7 May 27, 1950 7 May 27, 1950 7 May 28, 1950 7 May 28, 1950 7 May 31, 1950 6	
1933 May 22, 1933 7,60 630 May 14, 1949 8 1934 Apr. 21, 1934 3.76 143 May 26, 1949 6 1935 May 14, 1935 5.80 566 May 26, 1935 7.27 926 June 14, 1935 6.67 773 May 25, 1950 7 May 14, 1935 6.67 773 May 25, 1950 7 May 31, 1950 6	
June 2, 1933 7.38 595 May 18, 1949 8 May 28, 1949 7 June 12, 1949 7 June 12, 1949 7 June 12, 1949 7 June 12, 1949 7 June 12, 1949 7 May 26, 1935 7.27 926 May 26, 1935 7.27 926 May 26, 1950 7 June 14, 1935 6.67 773 May 25, 1950 7 May 31, 1950 6	.27 644 .25 856
1934 Apr. 21, 1934 3.76 143 June 12, 1949 6 1935 May 14, 1935 5.80 566 1950 Apr. 24, 1950 6 May 26, 1935 7.27 926 May 18, 1950 7 June 14, 1935 6.67 773 May 25, 1950 7 May 31, 1950 6	.47 1,190
May 26, 1935 7.27 926 May 18, 1950 7 June 14, 1935 6.67 773 May 25, 1950 7 May 31, 1950 6	.04 840 .66 697
May 26, 1935 7.27 926 May 18, 1950 7 June 14, 1935 6.67 773 May 25, 1950 7 May 31, 1950 6	.50 690
May 31, 1950 6	.86 998
1103 51, 1500 0	.77 978 .76 747
1936 Apr. 29, 1936 5.66 480 June 7, 1950 6	.35 660
May 6, 1936 7.24 835 June 13, 1950 5 May 15, 1936 5.97 553	.71 532
1951 May 12, 1951 5	.14 445
1937 May 19, 1937 7.94 768 May 31, 1937 6.55 570 1952 May 5, 1952 S	
	.28 1,100 .23 850
	.09 617
1938 May 1, 1938 7.50 762 June 4, 1952 10	.3 1,600
May 17, 1938 10.40 1,190	.90 778
May 29, 1953 6	.14 614
	.82 550 .73 738
1940 Apr. 27, 1940 5.40 431	.73
May 23, 1954 6	.18 437 .07 604
1941 May 4, 1941 7.60 698	15 630
May 14, 1941 7.86 804 1955 May 2, 1955 6 May 26, 1941 5.81 485	.15 620
1956 Apr. 27, 1956 5	.78 576
	.62 727 .84 558
May 27, 1942 7.71 968	,04
June 12, 1942 5.92 571 1957 May 11, 1957 7.	.47 907
	.58 508 .00 590
	60 937
1944 May 16, 1944 6.61 714 June 13, 1957 8	.60 1,180
May 24, 1944 6.82 760 June 29, 1957 6. June 29, 1957 6.	.27 644
	.05 811
1945 May 12, 1945 8.52 1,190 May 13, 1958 8.	.05 1,050
June 1, 1945 8.08 1,040 May 20, 1958 7.	.47 907
June 5, 1945 8.12 1,060 June 7, 1958 5. June 23, 1945 5.74 550	.43 481
1946 App 97 1946 9.35 999 May 14, 1959 5.	.37 454
1946 Apr. 27, 1946 6.15 620 1960 Apr. 22, 1960 5.	.70 532
1947 May 5, 1947 8.20 1.150 May 14, 1960 5	60 500
May 28, 1947 5.50 494 1003 May 18, 1003 6	670
June 4, 1947 5.72 534 1961 May 12, 1961 6. June 9, 1947 5.38 481	.11 572
June 21, 1947 5.35 485 1962 Apr. 25, 1962 7.	.34 800
1948 Apr. 29, 1948 6.07 642 May 9, 1962 8.	.32 1,070
1010 Apr. 13, 1340 0.07 044	

2555. Savery Creek at upper station, near Savery, Wyo.

Location.--Lat 41°13'10", long 107°22'10", in NE_{h}^{1} sec.2, T.14 N., R.89 W., on left bank 0.6 mile downstream from Coal Gulch and 14 miles north of Savery.

Drainage area .-- 200 sq mi.

Gage.--Recording. At present site at different datum prior to July 8, 1943.
At site 0.3 mile downstream at different datum July 8, 1943, to Sept. 20, 1944, and Oct. 1, 1952, to Nov. 3, 1953. Altitude of gage is 7,000 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 360 cfs prior to 1943 and below 410 cfs at present site and datum.

Remarks.--Diversions for irrigation of about 300 acres above station do not materially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 5, 1941	4.50	a495	1957	June 14, 1957	4.62	286
1942	May 27, 1942	4.35	ab362		June 17, 1957	4.47	259
1944	May 22, 1944	4.72	a285	1958	Apr. 18, 1958 Apr. 20, 1958 May 13, 1958	6.64 5.24 4.91	728 418 352
1953	May 20, 1953 May 24, 1953	4.33 3.95	342 248		May 23, 1958	5.65	503
	June 8, 1953	3.79	208	1959	Apr. 5, 1959	c4.32	-
1954	Apr. 5, 1954	8.20	-		Apr. 7, 1959	-	120
1955	Apr. 27, 1955	4.60	290	1960	Apr. 6, 1960 Apr. 22, 1960	7.70 4.1s	958 200
1956	May 24, 1956	4.50	a280	1961	Apr. 20, 1961	3.72	144
1957	May 9, 1957 May 20, 1957 June 7, 1957	4.96 4.31 4.32	352 230 242	1962	Feb. 12, 1962 Apr. 15, 1962	10.25	330 1,680

a Annual peak only. c Backwater from ice.

2560. Savery Creek near Savery, Wyo.

Location. -- Lat 41°06'00", long 107°22'50", in SW\(\frac{1}{4}\) sec.14, T.13 N., R.89 W., on left bank at downstream side of highway bridge, 1\(\frac{1}{4}\) miles downstream from Loco Creek, and 6\(\frac{1}{2}\) miles northeast of Savery.

Drainage area. -- 330 sq mi.

Gage.--Recording. At site 300 ft to right (on abandoned channel) at different datum prior to Nov. 17, 1946. Altitude of gage is 6,680 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended above on basis of slope-area measurement at 2,670 cfs.

Bankfull stage .-- 5 ft.

Remarks.--Diversions for irrigation of 1,530 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 300 cfs.

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)			
1942	Apr. 12, 1942 Apr. 22, 1942 May 10, 1942	5.89 4.95 5.27	1,320 892 1,040	1944	May 22, 1944 June 4, 1944	6.12 4.95	1,490 948			
1943	Mar. 30, 1943 Apr. 4, 1943 Apr. 25, 1943	4.50 4.33 5.08	710 6 4 2 951	1945	Apr. 22, 1945 May 11, 1945 June 1, 1945	4.68 6.14 5.94	840 1,380 1,360			
1944	May 5, 1943 June 2, 1943 May 13, 1944	3.70 5.80 4.51	400 1,280 756	1946	Apr. 17, 1946 Apr. 29, 1948 May 7, 1948	4.69 5.25 4.66	706 1,050 698			

b May have been higher during period of no record in April.

Peak stages and discharges of Savery Creek near Savery, Wyo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Apr. 29, 1949 May 3, 1949 May 17, 1949	5.41 5.54 6.07	1,130 1,220 1,630	1956	May 5, 1956 May 24, 1956	5.05 4.60	792 535
	June 12, 1949	4.72	602	1957	May 6, 1957 May 14, 1957	5.88 5.02	1,460 820
1950	Apr. 18, 1950 Apr. 23, 1950 May 17, 1950	4.48 5.06 5.46	519 882 1,160		May 19, 1957 May 28, 1957 June 13, 1957	4.78 5.12 5.05	656 894 850
1951	Apr. 6, 1951 May 6, 1951 May 17, 1951	4.27 4.67 4.49	385 602 500	1958	Apr. 19, 1958 May 6, 1958 May 10, 1958 May 23, 1958	5.35 5.82 5.86 5.24	1,070 1,440 1,470 1,020
1952	Apr. 21, 1952 May 4, 1952 May 21, 1952	5.08 7.30 5.92	1,020 2,670 1,040	1959	May 2, 1959	3.92	266
	May 26, 1952 June 4, 1952	5.76 6.47	932 1,500	1960	Mar. 28, 1960 Apr. 7, 1960 Apr. 11, 1960	4.05 5.63 5.67	308 1,260 1,340
1953	Apr. 29, 1953 May 8, 1953 May 20, 1953	4.34 4.39 5.85	382 413 1,440		Apr. 22, 1960 May 1, 1960	4.98 4.33	768 384
	June 7, 1953	4.46	495	1961	Mar. 25, 1961 Apr. 4, 1961	3.99 4.32	322 441
1954	Apr. 6, 1954 Apr. 14, 1954 Apr. 26, 1954	5.50 4.58 4.47	1,170 555 503	1962	Feb. 13, 1962 Apr. 16, 1962	4.45 6.96	475 2,360
1955	May 7, 1955	4.69	680			<u> </u>	

2570. Little Snake River near Dixon, Wyo.

<u>Location</u>.--Lat 41°01'50", long 107°32'55", in $NW_w^{\frac{1}{4}}$ sec.8, T.12 f., R.90 W., on right bank 150 ft upstream from Willow Creek, 650 ft downstream from highway bridge, and 0.8 mile west of Dixon.

Drainage area. -- 988 sq mi.

Gage.--Nonrecording May 27, 1910, to Sept. 30, 1923; recording thereafter. At site 625 ft upstream at datum 2.98 ft higher prior to Oct. 1, 1957. Datum of gage is 6,331.22 ft above mean sea level, datum of 1929.

 $\underline{\underline{\mathtt{Stage-discharge\ relation}}}.\text{--Defined\ by\ current-meter\ measurements\ below}$ $6,000\ \mathrm{cfs}$.

Remarks.--Diversions for irrigation of 13,300 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 3,200 cfs.

	1-0-1								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1917	May 20, June 10, 1917	8.50	5,350	1942	May 12, 1942 May 27, 1942	5.42 6.75	3,500 5,350		
1920	May 26, 1920	8.60	9,600	1943	June 2, 1943	7.26	6,060		
1921	May 29, 1921	8.10	7,350	1944	May 17, 1944 May 23, 1944	5.50 6.57	3,400 4,960		
1922	May 27, 1922	7.15	5,860		June 3, 1944	6.09	4,240		
1923	May 26, 1923	6.20	4,360	1945	May 12, 1945 June 5, 1945	6.56 6.54	4,980 4,910		
1938	May 1, 1938	6.16	4,450		,		-		
	May 19, 1938 May 29, 1938	7.34 6.36	5,880 4,500	1946	Apr. 27, 1946	5.29	3,060		
		ł		1947	May 9, 1947	5.70	4,400		
1939	May 2, 1939	5.44	3,290	1948	May 20, 1948	5.40	3,960		
1940	May 13, 1940	5.58	3,470	1340	May 20, 1340	3,40	3,360		
1941	Mor. 5 1043	6 74	4 400	1949	Apr. 30, 1949	5.38	3,520		
1941	May 5, 1941 May 14, 1941	6.34 6.58	4,480 4,920	l	May 5, 1949 May 18, 1949	5.65 6.03	3,940 1,590		
1040			·		May 30, 1949	5.88	4,300		
1942	Apr. 23, 1942	5.20	3,210	11	June 12, 1949	5.76	4,090		

Peak stages and discharges of Little Snake River near Dixon, Wyo .-- Continuei

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge
1950	May 18, 1950 May 25, 1950 June 2, 1950 June 7, 1950	5.92 6.10 5.72 5.60	4,260 4,580 3,900 3,680	1957	May 10, 1957 June 8, 1957 June 14, 1957 June 21, 1957 June 30, 1957	6.45 6.94 6.95 5.76 5.65	4,550 5,750 5,780 3,320 3,290
1951	May 29, 1951	5.26	3,290	,,,,,,			
1952	Apr. 29, 1952 May 5, 1952 May 15, 1952 June 4, 1952	6.55 7.18 6.34 7.15	5,820 7,330 5,320 7,260	1958 1959	May 8, 1958 May 13, 1958 May 26, 1958 May 14, 1959	8.13 8.47 8.61 7.10	4,360 5,040 5,340 2,420
1953	May 20, 1953 May 29, 1953 June 14, 1953	5.73 5.67 5.63	3,910 3,770 3,690	1960	Apr. 23, 1960 May 14, 1960	8.13 7.63	4,510 3,590
1954	May 23, 1954	4.89	2,170	1961	May 12, 1961	6.62	2,260
1955	May , 8, 1955	5,33	3,110	1962	Feb. 11, 1962 Apr. 25, 1962 May 13, 1962	10.10 8.34 8.72	9,200 4,880 5,720
1956	May 25, 1956	-	a3,400		Fiay 10, 1902	3.72	3,720

a Maximum daily.

2575. Willow Creek near Baggs, Wyo.

Location.--Lat 40°53', long 107°28', in sec.26, T.11 N., R.90 W., in Colorado, half a mile upstream from Box Spring Creek and 13 miles southeast of Baggs.

Drainage area. -- 5 sq mi, approximately.

Gage . -- Recording .

Stage-discharge relation. -- Defined by current-meter measurements below 70 cfs.

 $\underline{\underline{Remarks}}.\text{-No}$ diversion above station. Peaks are principally from snowmelt. $\underline{\underline{Base}}$ for partial-duration series, 60 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 24, 1914 June 5, 1914	1.55 1.90	68 89	1918	May 2, 1918	0.75	53
	June 12, 1914	1.55	68	1919	May 19, 1919	1.00	68
1915	June 12, 1915	1.40	70	1920	May 24, 1920 June 5, 1920	2.10	102 80
1916	May 9, 1916	1.25	86		,		
	June 4, 1916 June 16, 1916	1.35 1.30	98 9 2	1921	May 29, 1921 June 11, 1921	1.80 1.80	80 80
1917	May 17, 1917 June 9, 1917 June 17, 1917	1.35 1.55 1.50	86 97 94	1922	May 28, 1922 June 9, 1922	1.65 1.60	9 4 87
	Aug. 31, 1917	1.25	80	1923	June 13, 1923	2.10	115

2580. Willow Creek near Dixon, Wyo.

<u>Location</u>.--Lat 40°55′00", long 107°31′10", in SE^1_u sec.8, T.11 N., R.90 W., in Colorado, on right bank, 6 miles south of Colorado-Wyoming State line, 7 miles south of Dixon, and 8 miles upstream from mouth.

Drainage area. -- 24 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,700 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks. -- No diversion above station. Regulation by Elk Lake (capacity, 400 acre-ft) does not materially affect peak flows. Base for partial-duration series, 70 cfs.

Peak stages and dischar	rges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 23, 1954 July 25, 1954	3.97 4.25	88 107	1958	Apr. 19, 1958 May 2, 1958 June 7, 1958	4.75 3.86 3.82	171 87 8 4
1955	Aug. 25, 1955	4.65	138	1959	June 20, 1959	4.86	183
1956	Mar. 24, 1956 June 5, 1956	a3.79 3.66	- 67	1960	Mar. 22, 1960	a4.25	-
1957	Apr. 17, 1957 Apr. 21, 1957	4.50 3.90	1 4 6 91		Apr. 10, 1960 June 4, 1960	4.01 3.76	95 82
	May 10, 1957 May 14, 1957	4.97 3.97	195 97	1961	Mar. 15, 1961 June 9, 1961	a4.66 3.31	- 42
	June 7, 1957 June 13, 1957 June 17, 1957	4.07 3.96 3.90	106 96 91	1962	Apr. 15, 1962	4.60 3.99	156 99
	June 29, 1957	4.01	101		Apr. 20, 1962 July 1, 1962	3.66	71

a Backwater from ice.

2595. Fourmile Creek near Baggs, Wyo. (Published as "at Ryan's ranch, near Baggs" 1912-13)

Location.--Lat 40°51', long 107°29', in sec.9, T.10 N., R.90 W., in Colorado, 15 miles southeast of Baggs.

Drainage area. -- About 4 sq mi.

Gage . -- Recording.

Stage-discharge relation .-- Defined by current-meter measurements below 70 cfs.

Remarks.--Diversions for irrigation of 200 acres do not substartially affect peak flows. Peaks are principally from snowmelt. Records furnished by State engineer of Colorado. Base for partial-duration series, 30 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 20, 1912 May 30, 1912	1.82 1.60	150 108	1917	May 17, 1917 May 24, 1917 June 2, 1917	1.65 1.75 1.55	141 159 123
1913	Apr. 20, 1913 Apr. 29, 1913	1.40 1.55	68 93	1	June 9, 1917	1.80	168
1914	May 10, 1914	1.75	130	1918	May 22, 1918	1.15	30
1011	May 14, 1914	1.77	135	1919	May 5, 1919	1.20	-
1915	Apr. 29, 1915 May 13, 1915	1.45 1.35	83 69	1920	May 19, 1920 May 29, 1920 June 7, 1920	1.70 1.15 2.30	68 36 105
1916	Apr. 28, 1916 May 6, 1916 May 21, 1916	1.35 1.60 1.35	69 105 69		June 23, 1920 July 4, 1920	1.20 1.75	58 71
	May 30, 1916 Aug. 4, 1916	1.08 1.54	36 96	1921	May 29, 1921	1.17	36
1917	Oct. 7, 1916	1.08	36	1922	May 30, 1922 June 10, 1922	1.65 1.80	65 74

2600. Little Snake River near Lily, Colo.

Location.--Lat 40°32'50", long 108°25'25", in $NW_u^{\frac{1}{4}}NE_u^{\frac{1}{4}}$ sec.20, T.7 N., R.98 W., on left bank 170 ft downstream from highway bridge, 6 miles north of Lily, and 10 miles upstream from mouth.

Drainage area. -- 3,730 sq mi, approximately.

 $\underline{\tt Gage.--Recording.}$ At site 300 ft upstream at different datum prior to Dec. 1, 1935. Altitude of gage is 5,685 ft (from river-profile map).

Stage-discharge relation. --Defined by current-meter measurements below 8.800 cfs.

Remarks.--Diversions for irrigation of about 21,000 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 3,500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 11, 1923 May 29, 1923	6.50 7.40	4,000 5,350	1944	June 5, 1944	5.26	4,670
1924	May 5, 1924	5.35	3,790	1945	May 13, 1945 June 7, 1945	5.95 6.05	5,320 5,680
1925	May 17, 1925	4.80	3,060	1946	May 1, 1946	4.22	3,310
1926	Apr. 24, 1926 May 27, 1926	5.15 10.5	4,070 14,200	1947	May 7, 1947 May 29, 1947 June 22, 1947	5.68 5.56 5.92	5,480 5,220 5,910
1927	May 3, 1927 May 18, 1927	5.9 8.05	4,410 7,200	1948	May 22, 1948	5.15	4,200
1928	May 12, 1928	~	6,500	1949	Apr. 10, 1949 Apr. 30, 1949	4.94 4.97	3,760 3,800
1929	May 28, 1929	9.12	7,530		Apr. 30, 1949 May 5, 1949 May 18, 1949	5.48 5.95	4,620 5,550
1930	Aug. 15, 1930	6,55	3,590		May 31, 1949 June 13, 1949	5.27 5.31	4,260 4,320
1932	May 25, 1932	8.5	7,100	1950	May 19, 1950	5,52	4,620
1933	Apr. 30, 1933 May 23, 1933	6.85 7.55	4,140 5,140		May 27, 1950	5.48	4,560
	May 31, 1933 June 21, 1933	8.50 7.58	6,570 5,190	1951	May 30, 1951	4.63	3,220
1934	Apr. 24, 1934	4.56	996	1952	Apr. 9, 1952 May 7, 1952	7.82 7.30 5.86	9,040 8,200
1935	May 29, 1935 June 13, 1935	6.80 6.70	3,780 3,650		May 16, 1952 May 22, 1952 June 6, 1952	5,86 5,26 6,75	5,280 4,470 7,160
1936	Apr. 28, 1936 May 7, 1936	4.51 5.19	3,510 4,760	1953	May 21, 1953	5,02	3,950
	May 18, 1936 Aug. 3, 1936	4.93 5.92	4,230 6,590	1954	May 23, 1954	4.18	2,540
1937	May 20, 1937	5.65	5,820	1955	May 9, 1955	4.22	2,720
	June 2, 1937 July 13, 1937	4.78 4.42	4,130 3,510	1956	Mar. 20, 1956 May 10, 1956 May 23, 1956	5.86 4.85 6.00	5,460 3,800 5,730
1938	May 2, 1938 May 20, 1938 May 31, 1938	5.60 6.91 5.29	5,630 8,590 5,000	1957	May 10, 1957 June 10, 1957 June 15, 1957	6.65 5.82 5.90	6,870 5,390 5,540
1939	May 3, 1939	4.50	3,670	1958	May 9, 1958	5,51	4,450
1940	May 14, 1940	4.43	3,520		May 14, 1958 May 27, 1958	5.59 5.66	4,830 5,100
1941	May 6, 1941 May 14, 1941 Aug. 17, 1941	5.39 5.48 6.83	4,960 5,400 8,740	1959	Sept.27, 1959	4.34	2,780
1942	Apr. 16, 1942 May 12, 1942	4.62 4.66	3,710 3,780	1960	May 15, 1960	a4.95 4.65	3,240
	May 29, 1942	5.78	5,760	1961	May 13, 1961	3.69	1,900
1943	June 2, 1943	8.27	11,000	1962	Feb. 13, 1962 Mar. 28, 1962	all.1 8.30	10,200
1944	May 19, 1944 May 22, 1944	5.80 5.93	5,720 6,200		Apr. 22, 1962 May 9, 1962	5.55 5.50	4,900 4,760

a Backwater from ice.

2605. Jones Hole Creek near Jensen, Utah

<u>Location</u>.--Lat 40°33'30", long 109°03'15", in $\rm E_2^1$ sec.13, T.3 S., R.25 E., on left bank $\rm I_2^1$ miles south of Dinosaur National Monument boundary line, 5 miles northeast of Ruple Ranch (Island Park Ranch), and 20 miles northeast of Jensen.

Drainage area. -- 120 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 5,200 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{and\ extended\ above\ on\ basis\ of\ slope-area measurements\ below\ 320\ cfs}$

 $\frac{\text{Remarks.--No diversion above station.}}{\text{Only}} \text{ annual peaks are shown.}$

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	-	5.20	870	1956	May 22, 1956	2.06	62
1952	Apr. 26, 1952	5.40	968			1	
1953	May 16, 1953	2.20	82	1961	Mar. 15, 1961	3.10	223
1954	Apr. 5, 1954	4.14	474	d i		[
1955	Aug. 6, 1955	3.97	408				

2610. Green River near Jensen, Utah

Location.--Lat 40°24'30", long 109°14'00", in $SW_1^{\frac{1}{4}}SE_{\frac{1}{4}}$ sec.5, T.5 S., R.24 E., on right bank 1 mile downstream from Cub Creek and Chew Ranch, 4 miles southeast of Dinosaur National Monument headquarters, $6\frac{1}{2}$ miles northeast of Jensen, and 12 miles upstream from Brush Creek.

Drainage area. -- 25,400 sq mi, approximately.

<u>Gage</u>.--Nonrecording prior to Oct. 1, 1946, at site 15 miles downstream at different datums; recording thereafter. At datum 1.50 ft higher Dec. 13, 1946, to Sept. 30, 1948. Altitude of gage is 4,760 ft (from river-profile map).

<u>Stage-discharge relation</u>.--Defined by current-meter measurements. Relation subject to shifting at all stages.

Remarks.--Diversions above station for irrigation affect peak discharges. Base for partial-duration series, 14,000 cfs. Only annual peaks are shown prior to 1947.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	May 29, 1904	11.80	32,100	1954	May 25, 1954	8.60	15,900
1906	June 17, 1906	12.1	30,500	1955	June 19, 1955	7.54	11,900
1947	May 13, 1947 June 14, 1947 June 23, 1947	10.25 8.93 9.63	28,800 22,700 25,800	1956	May 11, 1956 June 1, 1956	8.58 11.34	15,600 26,500
1948	May 24, 1948	8.85	22,400	1957	May 13, 1957 June 16, 1957	10.00 13.22	22,000 36,500
1949	May 1, 1949 May 7, 1949	8.40 8.52	14,700 15,100	1958	May 29, 1958	11.81	29,500
·	May 20, 1949 June 15, 1949	10.23 10.51	21,300 23,200	1959	June 22, 1959	8.68	16,000
1950	Mar. 1, 1950	12.16	_	1960	Apr. 13, 1960	8.21	14,400
1500	Apr. 26, 1950 June 4, 1950	8.70 10.92	15,600 2 4 ,200	1961	June 1, 1961	7.37	12,100
19 51	June 3, 1951 June 22, 1951	11.40 10.33	26,900 21,600	1962	Feb. 12, 1962 Mar. 29, 1962 Apr. 28, 1962	10.58 10.98 10.42	23,500 25,000 22,700
1952	May 8, 1952 June 10, 1952	12.86 12.42	33,400 31,300		May 14, 1962 June 25, 1962	10.92 8.88	25,400 16,600
1953	June 17, 1953	10.34	22,300				

2620. Brush Creek near Vernal, Utah

Location. --Lat $40\,^\circ 35^\circ$, long $109\,^\circ 26^\circ$, in $SE_4^1SW_4^1$ sec. 3, T.3 S., R.22 E., on left bank 3 miles upstream from Little Brush Creek and 10 miles northeast of Vernal

Drainage area. -- 82 sq mi, approximately.

Gage.--Nonrecording prior to May 9, 1939; recording thereafter. At site 0.4 mile downstream at different datum prior to Apr. 25, 1959. Altitude of gage is 5,530 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 370 cfs.

Remarks.--Two small diversions above station for irrigation. Water from Oaks Park Reservoir on headwaters (capacity, 6,250 acre-ft) is diverted above station to Ashley Creek basin for irrigation. Peak discharges affected by regulation and diversion. Records for March 1939 to September 1941 collected and computed by Bureau of Reclamation and reviewed by Geological Survey. Base for partial-duration series, 140 cfs. Only annual peaks are shown prior to 1942 and subsequent to 1952.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	May 6, 1939	3.55	257	1949	May 17, 1949	3.32	256
1940	May 16, 1940	3.10	2 02		June 8, 1949 Sept.10, 1949	4.32 3.30	377 244
1941	Aug. 17, 1941	4.50	360				
3.040				1950	Apr. 23, 1950	3.40	264
1942	Apr. 23, 1942	2.60	159	li .	May 25, 1950	3.60	261
	May 13, 1942	2.88	190	li .	July 11, 1950	3.15	204
	May 30, 1942	3.89	293	11			
1943	Wa D 3047	0.70	3.77	1951	May 28, 1951	3.13	202
1945	May 2, 1943	2.39	137		July 28, 1951	4.19	330
1944	May 14, 1944	4.65	380	1952	May 4, 1952	3.99	290
	May 30, 1944	3.75	270	1	June 3, 1952	5.34	442
	June 2, 1944	4.06	306	}	July 30, 1952	3.35	179
	ĺ	ĺ	ĺ	íi –	Aug. 7, 1952	3.35	176
1945	May 14, 1945	2.56	158			ŀ	
	June 6, 1945	2.77	181	1953	May 30, 1953	3.07	176
	July 21, 1945	3.60	275	1954	May 10, 1954	2.78	155
	Į.			1955	Oct. 8, 1954	2.73	145
1946	Aug. 27, 1946	2.24	116	l	1		
	ł	}		1956	May 23, 1956	2.84	167
1947	May 11, 1947	3.68	261	1957	June 16, 1957	4.05	261
	June 23, 1947	5.08	433	1958	May 31, 1958	3.78	242
	Aug. 12, 1947	4.15	317	1959	Aug. 19, 1959	1.73	160
				1960	Aug. 26, 1960	2.87	37 0
1948	Feb. 6, 1948	3.03	-	ll			
	May 20, 1948	3.28	227	1961	Aug. 17, 1961	2.63	308
				1962	July 12, 1962	3.73	543
1949	May 5, 1949	2.84	206	L			

2630. Little Brush Creek near Vernal, Utah

<u>Location</u>.--Lat 40°43', long 109°30', in $SE_{\frac{1}{4}}$ sec.24, T.1 S., R.21 E., on right bank half a mile upstream from cave, three-quarters of a mile upstream from Kane Hollow, and $17\frac{1}{2}$ miles north of Vernal.

Drainage area. -- 28 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 8,000 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 320 cfs and extended above by logarithmic plotting.

Remarks. -- No diversion above station. Flow regulated by East Park Reservoir.

Peak discharges are affected. Base for partial-duration series, 200 cfs.

Peak stages and discharges of Little Brush Creek near Vernal, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 25, 1946	-	60	1950	May 24, 1950 May 30, 1950	2.78 3.71	326 608
1947	May 8, 1947 May 16, 1947	2.98 2.72	384 277		June 6, 1950	3.14	300
1948	May 19, 1948	2.93	365	1951	May 27, 1951	2.93	221
1340	May 21, 1948	2.98	388	1952	May 8, 1952 May 14, 1952	3.37 3.20	358 288
1949	May 15, 1949 May 29, 1949	3.08 2.58	365 244		June 3, 1962	3.22	324

2635. Brush Creek near Jensen, Utah

Location. --Lat 40°24', long 109°21', in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.4, T.5 S., R.23 E., on right bank 280 ft upstream from bridge on State Highway 149, 2,000 ft upstream from mouth, and $2\frac{3}{4}$ miles north of Jensen.

Drainage area .-- 255 sq mi.

<u>Gage.</u>--Nonrecording prior to Nov. 24, 1947, at three sites within 80 ft upstream at different datums; recording thereafter. At different datum Nov. 24, 1947, to Oct. 20, 1954. Altitude of gage is 4,730 ft (from riverprofile map).

 $\frac{Stage-discharge\ relation.--Defined\ by\ current-meter\ measurements\ below\ 330\ cfs}{and\ extended\ above.}\ Channel\ unstable\ at\ high\ stage.$

Remarks.--Many diversions above station for irrigation affect peak discharges.

Base for partial-duration series, 130 cfs. Only annual peaks are shown prior to 1948.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	May 25, 1940	2.76	125	1952	June 4, 1952	3.33	261
1941 1942	Aug. 17, 1941 June 1, 1942	5.50 3.34	900 212	1953	May 30, 1953	2.29	96
1943 1944	June 2, 1943 May 16, 1944	3.30 4.30	256 680	1954	Sept.26, 1954	2.32	104
1945	May 6, 1945	2.4	214	1955	Oct. 5, 1954 Oct. 8, 1954	1.52 4.05	159 762
1946 1947	Apr. 27, 1946 June 17, 1947	1.48 2.60	75 2 32	1956	Mar.4, May 20,	2.61	140
1948	July 20, 1948	3.14	194	1957	June 15, 1957	2.96	240
1949	May 18, 1949 June 9, 1949	2.96 2.82	212 177		July 19, 1957 Aug. 12, 1957	2.94 2.92	235 225
1950	Oct. 19, 1949 Apr. 24, 1950	3.89 3.07	521 212	1958	May 13, 1958	2.57	158
	May 19, 1950	3.17	230	1959	Sept.16, 1959	2.81	190
1951	May 31, 1951	2.87	156	1960	Aug. 23, 1960	4.88	603
1952	Apr. 7, 1952 Apr. 14, 1952	3.27 2.84	238 134	1961	Sept.18, 1961	4.38	486
i	Apr. 29, 1952 May 3, 1952	3.66 3.71	365 383	1962	Mar. 28, 1962	4.25	478

2640. Ashley Creek below Trout Creek, near Vernal, Utah

Location. --Lat 40°44'00", long 109°40'40", in NE $\frac{1}{4}$ sec.16, T.1 S., R.20 E., on right bank 1,000 ft downstream from Trout Creek, 3 miles upstream from South Fork, and 21 miles northwest of Vernal.

Drainage area. -- 27 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 9,200 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 570 cfs.

Remarks.--Flow slightly regulated by Long Park Reservoir. No diversion above station. Peak discharges not materially affected by regulation. Base for partial-duration series, 300 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 30, 1944 June 10, 1944 June 13, 1944	3.68 3.67 3.67	432 406 406	1949	June 8, 1949 June 18, 1949	3.48 3.28	47a 365
1945	June 4, 1945	3.34	279	1950	May 30, 1950 June 6, 1950	3.58 3.33	558 399
1946	Apr. 24, 1946	-	112	1951	May 27, 1951	-	500
1947	May 8, 1947 May 16, 1947 May 21, 1947	3.64 3.21 3.32	601 308 376	1952	May 14, 1952 May 30, 1952 June 3, 1952	3.22 3.35 3.52	370 410 518
1948	May 17, 1948 May 19, 1948 May 23, 1948	3.45 3.67 3.44	478 630 485	1953	May 31, 1953 June 12, 1953	3.12 3.12	308 303
1949	May 29, 1949	3.48	466	1954	May 9, 1954	3.14	315

2645. South Fork Ashley Creek near Vernal, Utah

Location.--Lat 40°44'00", long 109°42'10", in NE $\frac{1}{4}$ sec.17, T.1 S., R.20 E., on right bank at lower end of Hicks Park, $3\frac{1}{4}$ miles upstream from mouth and 21 miles northwest of Vernal.

Drainage area. -- 20 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 9,360 ft (by barometer).

 $\underline{\underline{Stage-discharge\ relation}}.--\underline{Defined\ by\ current-meter\ measurements\ below\ 210\ cfs}$ and by slope-area measurement at gage height 3.84 ft.

Remarks.--Flow slightly regulated in headwaters by Twin and Goose Lake Reservoirs (combined capacity, 500 acre-ft). No diversion above station. Peak discharges not materially affected by regulation. Base for partial-duration series. 200 cfs.

			•				
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1944	May 30, 1944 June 13, 1944 June 19, 1944 June 26, 1944	3.32 3.41 3.28 3.72	273 298 · 262 391	1950	Apr. 24, 1950 May 24, 1950 June 1, 1950 June 6, 1950	b4.56 2.98 3.46 3.25	222 359 288
1945 1946	June 4, 1945 May 6, 1946	3.00 2.47	198 93		June 11, 1950 June 20, 1950	3.05 3.07	227 227
1947	May 8, 1947 May 21, 1947 June 7, 1947	- 3.15 3.05	a240 233 210	1951 1952	May 27, 1951 May 14, 1952 June 6, 1952	3.54 2.97 3.37	404 202 343
	June 20, 1947	3.21	248		June 9, 1952 Aug. 8, 1952	3.73 3.32	452 291
1948	May 19, 1948 May 28, 1948 June 2, 1948	3.53 3.11 3.20	343 231 252	1953	June 12, 1953	3,54	402
1949	May 29, 1949	3.23	268	1954	May 22, 1954	3.15	229
	June 11, 1949 June 18, 1949	3.57 3.84	368 4 60	1955	May 20, 1955	3.07	207

a Maximum daily discharge; estimated.

b Backwater from 1ce.

2665. Ashley Creek near Vernal, Utah

<u>Location</u>.--Lat 40°34'50", long 109°37'20", in SE_4^1 sec.1, T.3 S., R.20 E., on left bank three-quarters of a mile upstream from head of Utah Power & Light Co.'s canal, $4\frac{1}{2}$ miles upstream from Dry Fork, and 10 miles northwest of Vermal.

Drainage area. -- 101 sq mi.

Gage.--Nonrecording or recording at sites a quarter of a mile to $1\frac{1}{2}$ miles downstream at different datums prior to Nov. 14, 1917. Recording at present site at datum 4.34 ft lower Nov. 14, 1917, to Sept. 30, 1942, and at datum 0.66 ft higher Oct. 1, 1942, to Aug. 5, 1960. Altitude of gage is 6,250 ft (from river-profile map).

Stage-discharge relation.--1911-14: Defined by current-meter measurements below 310 cfs.

1914-17: Defined by current-meter measurements below 610 cfs. 1917-62: Defined by current-meter measurements below 1,100 cfs.

Remarks.--Since July 1940, flow has been increased by water released from Oaks Fark Reservoir (capacity, 6,250 acre-ft) on Brush Creek and diverted to Ashley Creek basin for irrigation. City of Vermal pipeline (capacity, approximately 5 cfs) diverts water from tributary spring 1,000 ft above station (diversion began Aug. 1, 1941). At times, part of this flow is returned to Ashley Creek half a mile below station. Peak discharges not materially affected. Base for partial-duration series, 600 cfs. Only arnual peaks are shown prior to 1920.

Peak stages and discharges

Gage Gage Water Discharge Water Discharge height Date Date height year (cfs) year (cfs) (feet) (feet) 1912 May 27, 1912 3.9 880 1933 1, 1933 8.45 1,260 4.5 1,350 10, 1934 1914 May 23, 1914 14, 1915 1934 Mav 6.60 201 1915 May 4.15 1,260 1935 June 9, 1935 8.3 1,140 1916 May 8, 1916 4.44 820 24, 1917 1917 June 1,350 1936 (c) 7.39 524 25, 1918 10, 1919 4.50 1918 May 324 1919 4.20 14, 1937 May 278 1937 May 8.39 1,210 1920 May 28, 1920 8, 1920 7.05 1,360 1938 8.12 1,340 June (e) 1,340 7.08 8.38 1,200 1921 May 29, 1921 8.35 2,050 1939 Apr. 29, 1939 7.62 649 1,700 1922 June 8, 1922 8.67 1,010 June 18, 1922 8.47 1940 May 9. 1940 7.78 703 10, 1923 13, 1941 1923 7.82 620 1941 May 8.55 1,340 May 25, 1923 June 3, 1923 June 12, 1923 1,250 May 8.47 May 17, 1941 7, 1941 8.25 1,100 7.85 855 June 7.95 885 1.060 8.14 25, 1942 6, 1942 1942 May 8.52 1.270 17, 1924 1924 Mav 7.91 736 June 8.21 877 1925 June 9, 1925 7.42 507 1943 Apr. 30, 1943 2.97 702 1926 4, 1926 7.77 653 3.30 785 May 1944 May 16, 1944 20. May 1926 7.90 729 May 24, 1944 3.61 1,010 1,200 June 2, 1944 3.86 1927 May 17, 1927 8.66 1,220 June 13, 1944 June 26, 1944 3.50 925 May 26, 1927 June 28, 1927 670 7.80 3.34 813 7.89 723 Sept.10, 1927 8.70 1.250 1945 June 4, 1945 3.11 616 1928 Apr. 25, 1946 521 (a) 8.5 1,110 1946 2.95 8.57 1,160 1947 1,190 1929 May 8, 1947 3.94 June 7, 1929 June 16, 1929 8.14 877 May 16, 1947 2.84 624 9.05 1,560 May 21, 1947 2.95 784 May May 28, 1947 June 20, 1947 2.59 618 28, 1930 1930 May 8.20 1.040 g600 1931 Мау 15, 1931 7,56 560 1948 3.70 1,370 May 19. 1948 21, 1932 29, 1932 14, 1949 29, 1949 1949 3.05 1932 May 8.55 May 7.54 612 May 3.14 945

a Occurred during period May 1-15, 1928. b Occurred during period May 22-31, 1929. c Occurred during period Apr. 29 to May 9,1936. d Occurred during period May 5-12, 1938. e Occurred during period May 26-30, 1938. f Occurred during period May 31 to June 3, 1938. g Estimated.

Peak stages and discharges of Ashley Creek near Vernal, Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 11, 1949 June 18, 1949	3.03 3.08	875 8 9 7	1956	May 9, 1956 May 23, 1956	2.48 2.68	678 7 9 2
1950	May 22, 1950 May 30, 1950	3.18 3.36	1,040 1,250	1957	June 7, 1957	2,92	1,260
	June 6, 1950	2.75	842	1958	May 24, 1958 June 7, 1958	2.30 1.81	980 624
1951	May 25, 1951	3.14	1,070	1959	May 15, 1959	1.81	581
1952	May 4, 1952 May 14, 1952 June 3, 1952	3.24 2.87 2.78	1,330 1,080 1,040	1960	May 12, 1960	2.13	796
	June 10, 1952	2.34	776	1961	May 27, 1961	2.94	758
1953	June 12, 1953	2.22	658	1962	May 10, 1962 June 4, 1962	3.70 2.93	1,280 793
1954	May 9, 1954	2.37	720		June 10, 1962 June 13, 1962	2.67	620 634
1955	May 12, 1955	2.12	628		Julie 13, 1902	2.03	034

2680. Dry Fork above sinks, near Dry Fork, Utah

 $\underline{Location}$.-Lat 40°37'40", long 109°49'10", in sec.20, T.2 S., R.19 E. (ursurveyed), on left bank 9 miles northwest of Dry Fork and 14 miles upstream from mouth.

Drainage area. -- 48 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 8,108.51 ft above mean sea level (levels by $\underline{\text{Utah State Water}}$ and Power Board).

 $\underline{\underline{Stage-discharge\ relation}}_{and\ by\ slope-area\ measurements\ at\ gage\ height\ 4.85\ ft.}$

Remarks.--No diversion above station. Records March 1939 to September 1941 collected and computed by Bureau of Reclamation and reviewed by Geological Survey. Base for partial-duration series, 300 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Sept.13, 1939	-	a370	1950	June 6, 1950	4.25	536
1940	May 9, 1940	3.75	b334	1951	May 27, 1951 June 15, 1951	4.65 3.68	817 344 .
1941	May 23, 1941	4.37	b575	1952	W C 1050	7 07	750
1942	May 27, 1942 June 7, 1942	4.40 4.35	605 610	1952	May 6, 1952 May 14, 1952 June 6, 1952	3.67 3.72 4.49	356 341 866
1943	May 2, 1943	3.83	362	1953	June 12, 1953	4.37	652
1944	May 30, 1944 June 7, 1944	4.18 3.90	58 4 438	1954	May 22, 1954	3.67	385
	June 14, 1944 June 20, 1944	4.28 4.17	639 578	1955	May 11, 1955	3.46	276
	June 26, 1944	4.54	784	1 9 56	May 25, 1956	3.80	415
1945	June 22, 1945	3.56	240	1957	June 8, 1957 June 25, 1957	4.59 3.56	926 307
1946	Apr. 25, 1946	3.66	280	1958	May 27, 1958	4.38	780
1947	May 8, 1947 May 21, 1947	4.45 3.97	569 371	1320	May 27, 1958 June 7, 1958	3.93	489
	June 8, 1947 June 20, 1947	3.82 4.08	319 4 12	1959	June 6, 1959	3.36	262
1948	May 19, 1948	4.38	547	1960	May 13, 1960	3.66	356
1949	May 29, 1949	3.88	343	1961	May 27, 1961	3.84	380
	June 11, 1949 June 18, 1949	4.69 4.85	7 4 6 880	1962	May 10, 1962 June 4, 1962 June 13, 1962	3.67 3.63	338 316 515
1950	May 24, 1950 June 1, 1950	4.04 4.67	415 753		June 20, 1962	4.04 3.62	334

a Maximum daily. b Annual peak only.

2685. North Fork of Dry Fork near Dry Fork, Utah

Location.--Lat 40°38'20", long 109°48'30", in sec.17, T.2 S., R.19 E., on left bank 2 miles upstream from mouth and $9\frac{1}{2}$ miles northwest of Dry Fork.

Drainage area. -- 12 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,090 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 88 cfs.

Remarks .-- No diversion above station. Base for partial-duration series, 60 cfs.

Peak stages and discharges Gage Gage Discharge Water Water Discharge Date height Date height vear (cfs) year (cfs) (feet) (feet) 1946 Apr. 25, 1946 2.85 58 1954 May 22, 1954 2.76 48 1947 7, 1947 21, 1947 3.60 1955 11, 1955 2.64 38 136 Mav Mav May 3.05 78 1956 21, 1956 3.06 81 Mav 1948 May 17, 1948 19, 1948 3.18 86 4, 1957 May 3.14 81 1957 June 3.16 111 26, 1958 6, 1958 June 11, 1949 June 18, 1949 2.94 139 1949 60 1958 Mav 3.38 2.93 60 June 2.97 1950 May 24, 1950 3.16 80 1959 May 15, 1959 2.45 28 May 30, 1950 e 6, 1950 3.34 101 June 2.99 64 1960 Mav 12, 1960 3.08 84 1951 May 27, 1951 3.26 101 1961 May 23, 1961 2.66 42 2.94 9, 1962 3.08 1952 73 1962 May 98 June 4, 1962 June 13, 1962 May 14, 1952 2.95 69 2.80 60 2.85 64 June 3, 1952 3.03 73 1953 June 12, 1953 2.72 47

2690. East Fork of Dry Fork near Dry Fork, Utal

Location: --Lat 40°39'00", long 109°45'40", in sec.14, T.2 S., F.19 E. (unsurveyed), on right bank 3½ miles upstream from mouth and 8 miles northwest of town of Dry Fork.

Drainage area. -- 12 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 8,150 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 170 cfs and by slope-area measurement at gage height 4.27 ft.

 $\underline{\text{Remarks.--No}}$ diversion above station. Base for partial-duration series, $\underline{100}$ cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height year (cfs) vear (cfs) (feet) (feet) 1946 Mav 5, 1946 2.63 29 1954 Mav 22, 1954 3 22 109 1947 Mav 8, 1947 3.54 · 234 1955 Mav 20. 1955 2.87 66 May 21, 1947 June 7, 1947 June 20, 1947 3.42 3.33 1956 21, 1956 3.29 147 158 Mav 184 3.39 June 10, 1957 1957 3.66 202 1948 May 17, 1948 3.62 134 29, 1958 7, 1958 1958 May 3.50 167 1949 May 29, 1949 June 18, 1949 3,54 112 June 3.27 124 4.27 240 May 15, 1959 1959 2.63 36 1950 May 24, 1950 3.29 105 June May 13, 1960 3.20 102 1, 1950 3.86 185 1960 June 6, 1950 June 11, 1950 164 3.74 3.50 97 124 1961 Mav 29, 1961 2.98 1951 May 28, 1951 3,65 139 1962 Mav 10, 1962 3.35 149 4, 1962 June 3.20 114 1952 June 3, 1952 3,66 152 June 13, 1962 3.27 123 1953 126 June 12, 1953 3.18

2700. Dry Fork below springs, near Dry Fork, Utah

Location.--Lat 40°34', long 109°42', in $NW_{\bar{q}}^{\bar{l}}SE_{\bar{q}}^{\bar{l}}$ sec.8, T.3 S., R.20 E., on right bank $1\frac{1}{2}$ miles northwest of Dry Fork and 6 miles upstream from mouth.

Drainage area. -- 102 sq mi.

Gage.--Recording. Datum of gage is 6,706.95 ft above mean sea level (levels by Utah Water and Power Board).

Stage-discharge relation.--Defined by current-meter measurements below 650 cfs and extended above.

Remarks. -- No diversion above station. Station just downstream from group of intermittent springs. Runoff closely associated with snowmelt. Peak discharges attenuated by behavior of springs. Base for partial-duration series, 270 cfs.

Peak stages and discharges

Water	Date .	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 23, 1941	4.50	a611	1956	May 25, 1956	4.57	573
1942	May 28, 1942 June 7, 1942	4.72 4.71	697 693	1957	June 10, 1957	5.26	882
		1		1958*	May 27, 1958	5.75	972
1943	May 2, 1943 May 30, 1943	4.09 3.84	409 322		June 7, 1958	5.18	684
	, , , , , , , , , , , , , , , , , , , ,			1959	June S, 1959	3.50	132
1944	May 31, 1944	4.74	682				
	June 7, 1944 June 15, 1944	4.56 4.76	600 6 92	1960	May 13, 1960	4.31	345
	June 21, 1944 June 26, 1944	4,67 4,82	650 720	1961	May 28, 1961	4.32	316
	June 20, 1344	4.02	120	1962	May 10. 1962	4,58	400
1945	June 4, 1945	3.60	267		June 5, 1962 June 15, 1962	4.41 4.86	341 455
1954	May 22, 1954	4.27	492		June 21, 1962	4.75	442
1955	May 14, 1955	3.70	228				

a Annual peak only.

2705. Dry Fork at mouth, near Dry Fork, Utah

<u>Location</u>.--Lat 40°31'40", long 109°36'20", in $SW_{\overline{u}}^{\frac{1}{2}}$ sec.30, T.3 S., R.21 E., on left bank 900 ft upstream from mouth and 4 miles southeast of town of Dry Fork.

Drainage area .-- 118 sq mi.

Gage .-- Recording. Altitude of gage is 5,850 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 450 cfs and extended above on basis of logarithmic plotting and comparison with records for Ashley Creek at Sign of the Maine.

Remarks.--Several diversions above station for irrigation do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 250 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Tischarge (cfs)
1955	Aug. 25, 1955	5.18	al,210	1960	May 13, 1960	3.41	245
1956	May 26, 1956	3.67	a4 85	1961	May 30, 1961	3.62	290
1957	June 9, 1957	4.34	a823	1962	May 10, 1962 June 4, 1962	4.50	527
1958	May 28, 1958 June 7, 1958	4.52 4.33	812 675		June 4, 1962 June 14, 1962 June 22, 1962	4.10 4.52 4.13	355 518 367
1959 a An	June 8, 1959 nual peak only.	2.17	62				

2710. Ashley Creek at Sign of the Maine, near Vernal, Utah

Location. --Lat 40°31'00", long 109°35'40", in NE $\frac{1}{4}$ sec.31, T.3 S., R.21 E., on left bank three-quarters of a mile downstream from Dry Fork and $4\frac{3}{4}$ miles northwest of Vernal.

Drainage area .-- 241 sq mi.

Gage. -- Nonrecording March 1900 to December 1904 at sites a quarter of a mile upstream at different datums; recording since June 1939. At site 100 ft upstream at datum 0.68 ft higher June 23, 1939, to Sept. 25, 1956. Altitude of gage is 5,750 ft (from topographic map).

Stage-discharge relation.--1900-1904: Defined by a few current-meter measurements below 1,700 cfs.

1939-62: Defined by current-meter measurements below 1,500 cfs.

Remarks. -- Since Apr. 1, 1946, flow increased by water released from Oaks Park Reservoir (capacity, 6,250 acre-ft) on Brush Creek and diverted to Ashley Creek basin for irrigation. Diversions above station for irrigation and municipal water supply. Peak discharges not materially affected by diversions. Records for June 1939 to September 1941 collected and computed by Bureau of Reclamation and reviewed by Geological Survey. Base for partial-duration series, 800 cfs. Only annual peaks are shown prior to 1942.

			Peak stages a	ina aisen	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1900	May 27, 1900	3.7	960	1949	June 18, 1949	5,26	1,610
1901 1902 1903 1904	May 18, 1901 May 28, 1902 June 8, 1903 May 23, 1904	4.3 3.8 4.7 4.3	1,140 990 2,110 1,380	1950	May 24, 1950 May 30, 1950 June 7, 1950	4.96 5.40 4.32	1,500 2,220 1,250
1940	May 9, 1940	3,52	844	1951	May 28, 1951	4.90	1,710
1941 1942	May 13, 1941 May 26, 1942	4.60 4.72	1,650 2,000	1952	May 6, 1952 May 14, 1952 June 3, 1952	4.88 4.70 4.98	1,500 1,300 1,520
1342	June 7, 1942	4.33	1,610	1953	June 13, 1953	4.46	1,160
1943	May 3, 1943	-	790	1954	May 22, 1954	4.02	920
1944	May 16, 1944 May 24, 1944	3.80 4.18	1,060 1,390	1955	Aug. 25, 1955	4.61	1,230
	May 30, 1944 June 14, 1944	4.68 4.39	1,880 1,590	1956	May 23, 1956	4.42	1,230
	June 26, 1944	4.34	1,540	1957	June 7, 1957 June 21, 1957	4.85 3.83	1,950 870
1945	June 4, 1945 July 21, 1945	3.58 5.40	884 2,650	1958	May 27, 1958 June 7, 1958	4.83 4.38	1,690 1,2 4 0
1946	Apr. 26, 1946	3,42	519	1959	May 16, 1959	3.42	540
1947	May 8, 1947 May 21, 1947 June 20, 1947	5.33 4.65 4.33	2,090 1,240 1,010	1960	May 13, 1960	4.13	954
1948	May 19, 1948	4.76	1,700	1961	May 29, 1961	4.02	899
1949	May 15, 1949 May 29, 1949 June 12, 1949	4.01 4.70 5.09	850 1,150 1,470	1962	May 10, 1962 June 4, 1962 June 14, 1962 June 21, 1962	4.82 4.21 4.18 3.88	1,650 1,080 1,090 846

2715. Ashley Creek near Jensen, Utah

Location.--Lat 40°22', long 109°25', in $NE_{ij}^{\frac{1}{4}}$ sec.23, T.5 S., R.22 E., on right bank immediately downstream from bridge on U.S. Highway 40, 3 miles upstream from mouth and 3 miles west of Jensen.

Drainage area. -- 386 sq mi.

Gage.--Recording. Datum of gage is 4,795.36 ft above mean sea level, datum of 1929.

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks. -- Flow increased by water released from Oaks Park Reservoir (capacity, 6,250 acre-ft) on Brush Creek and diverted to Ashley Creek basin for irrigation. One diversion between station and mouth of Creek. Peak discharges are materially affected. Base for partial-duration series, 900 cfs.

Peak stage:	s and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 9, 1947	5.02	1,370	1953	June 13, 1953	4.01	890
	May 28, 1947 June 4, 1947	4.49 4.19	1,080 911	1954	May 22, 1954	2.39	221
	June 21, 1947	4.38	1,020	1304	May 22, 1954	2.39	221
			-	1955	Oct. 8, 1954	4.16	900
1 94 8	May 20, 1948	4.43	1,040	1956	Mor. 27 1050	3.82	761
1949	May 30, 1949	4.29	925	1936	May 23, 1956	3.02	,01
	June 12, 1949	5.35	1,480	1957	June 11, 1957	4.66	1,090
	June 19, 1949	5.12	1,400	3.050	Man 00 1050	5.00	1 070
1950	May 25, 1950	4.68	1,200	1958	May 28, 1958	5.08	1,230
2000	May 31, 1950	4.95	1,350	1959	Aug. 12, 1959	1.88	93
	June 7, 1950	4.07	906				
1951	May 29, 1951	4.35	1,130	1960	June 8, 1960	2.13	132
1331	May 23, 1951	4.55	1,130	1961	Sept.18, 1961	3.20	378
1952	May 7, 1952	4.79	1,300		' '	-	
	May 14, 1952	4.09	945	1962	May 11, 1962	4.79	1,110
	June 4, 1952	4.90	1,350	<u> </u>	1	L	l

2730. Duchesne River at Provo River Trail, near Hanna, Utah

<u>Location</u>.--Lat 40°37'30", long 110°53'20", in $SE^1_{\overline{u}}$ sec.27, T.3 N., R.9 W., Uinta meridian, on right bank 400 ft downstream from Provo River Trail, 7 miles upstream from Hades Creek, and 12 miles northwest of Hanna.

Drainage area. -- 39 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 8,135.97 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation. --Defined by current-meter measurements below 600 cfs and extended above.

Remarks. -- No diversion or regulation above station. Base for partial-duration series, 500 cfs.

Water year	D.	ate	Gage height (feet)	Discharge (cfs)	Water year		Date	Gage height (feet)	Discharge (cfs)
1930		9, 1930 1, 1930	3.21 3.53	636 851	1937	May	17, 1937	3.38	708
1931	May 1	6, 1931	2.90	455	1938		-	-	a600
1932	May 2	1, 1932	3,22	621	1939	May	15, 1939	2.65	384
		4, 1932 4, 1932	3.42 3.68	732 888	1940	May	15, 1940	3.05	566
1933	June	2, 1933	3,14	580	1941	May	26, 1941	-	b540
	June 1	0, 1933	3.40	. 720	1942	May June	26, 1942 7, 1942	3.02	539 670
1936		9, 1936 9, 1936	3.28 3.48	650 768	1943	May	27, 1943	3.14	593

a Estimated.

b Maximum daily discharge; estimated.

Peak stages and discharges of Duchesne River at Provo River Trail near Hanna, Utah--Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 20, 1943	3.12	584	1950	June 1, 1950 June 6, 1950	3.43 3.50	735 770
1945	June 22, 1945	-	480		June 16, 1950	3.70	880
1946	June 5, 1946	3.19	c6 4 2	1951	May 27, 1951 June 16, 1951	3.67 3.98	847 1,020
1947	May 8, 1947	3.02	546	İ	- Tune 10, 1001	0.50	1,020
	May 26, 1947	3.08	579	1952	May 14, 1952	2.98	521
	June 7, 1947	3.32	698	Ī	June 9, 1952	4.02	982
	June 19, 1947	3.03	556				
	l			1953	June 13, 1953	4.30	1,180
1948	May 21, 1948	3,35	598				
	May 31, 1948	3.29	570	1954	May 20, 1954	1.59	98
1949	June 12, 1949	3.80	892				

c Annual peak only.

2735. Hades Creek near Hanna, Utah

Location.--Lat 40°32'10", long 110°52'00", in SE_u^1 sec.26, T.2 N., R.9 W., Uinta meridian, on right bank a quarter of a mile upstream from mouth and 11 miles northwest of Hanna.

Drainage area. -- 7.5 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,460 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements below 99 cfs.

Remarks.--Two diversions 2,000 ft above station for irrigation of 60 acres do not materially affect most peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 50 cfs.

Peak stages and discharges

	reak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1950	June 20, 1950	3.07	105	1957	June 25, 1957	2.13	65				
1951	May 30, 1951 June 16, 1951	2.19 2.36	76 90	1958	May 29, 1958	2,29	80				
1952	June 9, 1952	2.13	132	1959	June 8, 1959	1.95	45				
1953	June 13, 1953	2.27	78	1960	June 3, 1960	1.87	42				
1954	May 20, 1954	1.82	35	1961	Dec. 8, 1960 June 20, 1961	a3.39 1,67	- 29				
1955	June 8, 1955	2.25	68	1962	Dec. 11, 1961	a3,65	<u>-</u> .				
1956	June 6, 1956	2.23	72		May 11, 1962 June 13, 1962 June 21, 1962	1.97 2.20 2.17	50 65 86				
1957	June 7, 1957	2.21	87		June 21, 1302	٠.1/	86				

a Backwater from ice.

2740. Duchesne River near Hanna, Utah

<u>Location</u>.--Lat $40\,^\circ32\,^\circ00^{\circ}$, long $110\,^\circ52\,^\circ00^{\circ}$, in NE $\frac{1}{4}$ sec.35, T.2 N., R.9 W., Uinta meridian, on right bank 100 ft downstream from Hades Creek and 11 miles northwest of Hamma.

Drainage area .-- 78 sq mi, approximately.

Gage. -- Nonrecording prior to Mar. 28, 1946; recording thereafter. At site 150 ft downstream prior to Sept. 10, 1953. At different datum prior to Mar. 28, 1946, and at datum 0.42 ft lower Mar. 28, 1946, to Sept. 9, 1953. Altitude of gage is 7,380 ft (from river-profile map).

<u>Stage-discharge relation</u>.--1922-23: Defined by current-meter measurements below 950 cfs and extended above.

1946-62: Defined by current-meter measurements below 1,200 cfs and extended above.

Remarks.--Diversions for irrigation of 60 acres above station do not materially affect peak flows. Base for partial-duration series, 900 cfs.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	June 8, 1922	4.65	1,490	1953	June 13, 1953	5,65	1,500
1923 1946	June 12, 1923 June 5, 1946	4.40	1,350 897	1954	May 12, 1954	3,65	386
1947	May 26, 1947	4.58	887	1955	May 22, 1955	4.38	598
1948	May 21, 1948	4.72	1,000	1956	June 1, 1956	5.26	1,080
1949	June 12, 1949	5.17	1,240	1957 1958	June 7, 1957 May 27, 1958	5.62 5.35	1,440
1950	June 1, 1950 June 6, 1950 June 16, 1950	5.08 5.08 5.01	1,160 1,190 1,160	1959	June 6, 1959	2.98	202

Peak stages and discharges

2750. West Fork Duchesne River below Dry Hollow, near Hanna, Utah

1960

1961

1962

May 13, 1960

June 7, 1961

May 10, 1962

2.94

2.89

3.44

189

182

356

<u>Location</u>.--Lat 40°27', long 110°59', in SE $\frac{1}{4}$ sec.25, T.1 N., R.10 W., Uinta meridian, on left bank 200 ft downstream from Dry Hollow, 5 miles upstream from Wolf Creek, and 12 miles northwest of Hanna.

1,330

1,230

1,390

Drainage area. -- 47 sq mi, approximately.

5.33

5.14

5.45

May 27, 1951 June 16, 1951

June 7, 1952

1951

1952

Gage .-- Recording. Altitude of gage is 7,630 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 410 cfs and extended above by logarithmic plotting.

 $\frac{\text{Remarks.--No diversions above station.}}{\text{Base for partial-duration series, 300 cfs.}}$

Peak stages	and	discharges
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Water year		Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May	30, 1950	3.93	687	1956	May 19, 1956	3.24	389
1951	May	27, 1951	3.73	631	1957	June 6, 1957	4.09	732
1952	May May	6, 1952 14, 1952	3.01 3.30	332 440	1958	May 27, 1958	4.32	721
	May June	20, 1952 4, 1952	2.98 3.93	321 699	1959	May 15, 1959	2.72	169
1953	June	10, 1953	3.53	539	1960	May 12, 1960	3.20	307
	}	•			1961	May 11, 1961	2.62	152
1954	May	13, 1954	2.73	250	1962	May 9, 1962	3.40	413
1955	May May	13, 1955 22, 1955	3.02 3.14	308 344	1002	June 2, 1962 June 9, 1962	3.50	460 390

2755. West Fork Duchesne River near Hanna, Utah

Location.--Lat 40°27', long 110°53', in SE $_{\pi}^1$ sec.27, T.1 N., R.9 W., on left bank 1,000 ft upstream from Wolf Creek and 4 miles west of Hanna.

Drainage area. -- 61 sq mi, approximately.

<u>Gage.</u>--Nonrecording near present site at various datums prior to Oct. 1, 1923; recording thereafter. Altitude of gage is 7,200 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 450 cfs.

Remarks.--No diversion above station. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 12, 1923	2.70	534	1953	June 10, 1953	3.95	488
1946	May 9, 1946	2.95	293	1954	May 13, 1954	2.95	235
1947	May S, 1947 May 21, 1947	3.54 3.48	384 362	1955	May 13, 1955 May 21, 1955	3.30 3.45	330 369
1948	May 19, 1948	3.85	438	1956	May 19, 1956	3.59	446
1949	May 14, 1949 May 28, 1949	3.21 3.50	327 382	1957	June 6, 1957	4.22	666
	June 11, 1949	3.20	321	1958	May 29, 1958	3.97	551
1950	May 24, 1950 May 31, 1950	3.90	443 a550	1959	May 15, 1959	2.62	186
	June 5, 1950 June 11, 1950	3.84 3.30	550 391	1960	May 12, 1960	3.08	304
1951	May 27, 1951	4.33	619	1961	May 11, 1961	2.38	145
1501		1.00	013	1962	May 9, 1962	3.43	461
1952	May 5, 1952 May 14, 1952 June 4, 1952	3.89 4.04 4.40	438 493 652		June 2, 1962 June 9, 1962	3.42 3.28	420 383

a Maximum daily.

2760. Wolf Creek above Rhodes Canyon, near Hanna, Utah

<u>Location</u>.--Lat 40°28', long 110°55', in $NW_{\overline{4}}^1$ sec.21, T.1 N., R.9 W., on left bank $1\frac{1}{2}$ miles upstream from Rhodes Canyon, $2\frac{3}{4}$ miles upstream from mouth, and $5\frac{1}{2}$ miles northwest of Hanna.

Drainage area. -- 9 sq mi, approximately.

Gage.--Recording gage and concrete control. Altitude of gage is 7,720 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 55 cfs and extended above.

Remarks. -- No diversion above station. Base for partial-duration series, 25 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 26, 1946	2.03	31	1950	June 11, 1950 July 7, 1950	2.12 1.99	42 29
1947	May 8, 1947	2.21	44	H			
	May 26, 1947	2.28	48	1951	May 29, 1951	2.30	61
	June 12, 1947	2.01	26	İ	June 7, 1951 June 20, 1951	2.03	32 31
1948	May 21, 1948	2.46	56	ĮĮ.			
	1]		1952	May 4, 1952	2.25	32
1949	May 15, 1949	2.01	25	ii .	May 14, 1952	2.34	45
	May 30, 1949	2.17	36	Ц	June 8, 1952	2.64	82
	June 11, 1949	2.60	72	H	1	1	i
	1		ŀ	1953	June 13, 1953	2.39	56
1950	May 22, 1950	2.40	52	!!	July 30, 1953	2.44	60
	May 30, 1950	2.25	52	l l	1 - 1		1
	June 5, 1950	2.20	58	1954	May 16, 1954	2.44	60

Peak stages and discharges of Wolf Creek above Rhodes Canyon, near Hanna, Utah--Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 21, 1955 May 24, 1955 Aug. 25, 1955	2.32 2.22 2.14	44 34 25	1960	May 12, 1960 May 22, 1960	2.21 2.17	35 29
1956	May 25, 1956	2.24	38	1961 1962	May 18, 1961	1.93	10
1957	June 6, 1957	2.44	60	1962	May 11, 1962 June 2, 1962 June 13, 1962	2.19 2.29 2.38	29 39 49
1958	May 25, 1958	2.48	67				
1959	June 2, 1959	2.12	25			L	

2770. Duchesne River at Hanna, Utah

<u>Location</u>.--Lat 40°25', long 110°47', in $SE_{\pi}^{\frac{1}{4}}$ sec.4, T.1 S., R.8 W., Uinta meridian, at downstream side of left abutment of road bridge, 1 mile downstream from Sand Creek and 1 mile northwest of Hanna.

Drainage area. -- 230 sq mi, approximately.

Gage . -- Recording.

Stage-discharge relation. -- Defined by current-meter measurements below 1,900 cfs.

 $\underline{\underline{Remarks}}$.--Several diversions above station for irrigation affect peak flows. Base for partial-duration series, 900 cfs.

Pagir	atemea	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 12, 1954	3.66	616	1957	July 18, 1957	4.22	1,120
1955	May 22, 1955	4.42	1,020	1958	May 28, 1958 June 9, 1958	4.84 3.96	2,160 1,050
1956	June 2, 1956	4.98	1,710	1959	June 6. 1959	3.15	491
1957	June 7, 1957 June 27, 1957	5.16 4.18	2,260 1,110	1960	May 13, 1960	3.34	580

2775. Duchesne River near Tabiona, Utah

Location.--Lat 40°18', long 110°37', in $NW_{\overline{1}}^{1}NW_{\overline{1}}^{1}$ sec.19, T.2 S., R.6 W., Uinta meridian, on right bank half a mile upstream from bridge on State Highway 35, 7 miles upstream from Rock Creek, and $7\frac{1}{2}$ miles southeast of Tabiona.

Drainage area .-- 352 sq mi.

<u>Gage</u>.--Nonrecording prior to Oct. 16, 1934; recording thereafter. At site half a mile downstream at various datums prior to Nov. 7, 1953. Altitude of gage is 6,227 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Remarks. -- Several diversions above station for irrigation; peak discharges not materially affected. Base for partial-duration series, 900 cfs. Only annual peaks are shown prior to 1935.

Peak stages and discharges of Duchesne River near Tabiona, Utah

	reak stage	s and dis	charges of be	icheshe n	Iver hear labion	a, otan	
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919 1920	May 24, 1919 June 9, 1920	5.2 13.53	1,420 1,900	1944	June 21, 1944 June 26, 1944	6.17 6.45	990 1,180
1921 1922 1923	June 13, 1921 June 9, 1922 June 13, 1923	14.40 14.4 13.68	2,500 2,350 2,010	1945	June 5, 1945 July 19, 1945	6.00 6.90	900 1,520
1924 1925	May 19, 1924 May 21, 1925	12.08 12.14	900 930	1946	May 7, 1946 June 6, 1946	6.06 6.19	921 1,000
1926 1927 1928 1929 1930	May 23, 1926 June 9, 1927 May 28, 1928 May 25, 1929 June 12, 1930	12.22 13.07 13.34 13.82 12.27	950 1,530 1,510 1,870 1,040	1947	May 9, 1947 May 22, 1947 May 27, 1947 June 9, 1947	6.81 6.55 6.64 6.28	1,450 1,260 1,330 1,070
1931	July 26, 1931	5 .48	521	1948	May 22, 1948	6.79	1,430
1932 1933 1934	May 22, 1932 June 11, 1933 May 6, 1934	6.62 6.38 4.52	1,100 975 209	1949	May 18, 1949 May 30, 1949 June 13, 1949	6.22 6.45 7.00	1,060 1,220 1,550
1935	June 14, 1935 Aug. 28, 1935	7.01 6.70	1,220 1,030	1950	June 2, 1950 June 7, 1950 June 17, 1950	7.49 7.73 7.66	1,840 1,740 1,560
1936	May 15, 1936 May 27, 1936 July 25, 1936	6.89 6.75 6.65	1,590 1,480 1,400	1951	May 29, 1951 June 17, 1951	8.24 7.75	1,890 1,500
1937	May 18, 1937 May 30, 1937	7.01 6.40	1,750 1,260	1952	May 6, 1952 May 15, 1952 June 6, 1952	7.59 5.99 6.63	1,570 1,540 2,060
1938	May 17, 1938 May 29, 1938	6.22 7.08	1,040 1,660		June 26, 1952	5.17	999
1939	May 5, 1939	5.86	811	1953 1954	June 14, 1953	6.61	1,800
1940	May 16, 1940 Aug. 24, 1940	6.25 6.02	1,060 958	1954	May 12, 1954 May 23, 1955	3.91 4.59	542 961
1941	May 14, 1941 May 18, 1941	6.53 6.46	1,280 1,230	1956	June 2, 1956	5.29	1,450
	May 27, 1941 June 7, 1941	6.61 6.09	1,230 1,330 972	1957	June 7, 1957 June 28, 1957 Aug. 5, 1957	5.93 4.69 4.93	2,080 994 1,070
1942	May 27, 1942 June 8, 1942	6.68 6.50	1,370 1,240	1958	May 28, 1958	5,82	1,830
1943	May 3, 1943	6.36	1,140	1959	June 7, 1959	3.51	357
	June 1, 1943 June 21, 1943 June 29, 1943	6.73 6.11 6.63	1,410 1,020 1,380	1960	Sept. 2, 1960	5.23	1,410
1944	May 17, 1944	6.31	1,090	1961	Aug. 25, 1961	4.50	849
	June 1, 1944 June 15, 1944	6.74 6.21	1,300 1,020	1962	May 11, 1962	6.48	1,000

2780. South Fork Rock Creek near Hanna, Utah

<u>Location</u>.--Lat 40°33'10", long 110°42'10", in SE $\frac{1}{4}$ sec.20, T.2 N., R.7 W., Uinta meridian, on right bank 1 mile upstream from mouth and 11 miles northeast of Harma.

Drainage area. -- 14 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 7,860 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 120 cfs.

Remarks.--Small diversion above station does not materially affect peak flows.

Feaks are principally from snowmelt. Base for partial-duration series,
60 cfs.

Peak stages and discharges of South Fork Rock Creek near Hanna, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	May 22, 1954	2.10	51	1959	June 7, 1959	1.86	59
1955	June 8, 1955	2.28	a75	1960	Nov. 20, 1959 June 3, 1960	b2.91 1.88	- 59
1956	June 1, 1956	2.52	a127	1961	Nov. 21, 1960 Sept.18, 1961	b2.52 1.88	- 52
1957	June 6, 1957	2.42	118	}	Dop-1120, 1002	1	1
	June 27, 1957	2.17	63	1962	May 9, 1962 June 13, 1962	2.19 2.22	90 104
1958	May 29, 1958	2.42	139		June 25, 1962	2.32	109

a Annual peak only. b Backwater from ice.

2785. Rock Creek near Hanna, Utah

<u>Location</u>.--Lat 40°33'00", long 110°39'40", in NE $\frac{1}{4}$ sec.27, T.2 N., R.7 W., Uinta meridian, on right bank $1\frac{1}{4}$ miles downstream from South Fork and $11\frac{1}{2}$ miles northeast of Hanna.

Drainage area. -- 120 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,620 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,600 cfs.

Remarks.--Peaks are principally from snowmelt and are not materially affected by diversions. Base for partial-duration series, 1,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	June 1, 1950 June 6, 1950 June 16, 1950	7.32	1,680 1,780 1,760	1957	June 7, 1957 June 27, 1957	7.94 7.38	2,200 1,860
1951	May 28, 1951 June 16, 1951	7.19 7.67	1,640 1,970	1958	May 27, 1958 June 6, 1958	7.38 7.06	1,850 1,690
1952	June 9, 1952	8.16	2,240	1959 1960	June 8, 1959 June 2, 1960	6.65 6.62	1,410 1,450
1953	June 13, 1953	8.60	2,540	1961	May 27, 1961	5.32	775
1954 1955	May 19, 1954 May 22, 1955 June 8, 1955	6.42 6.23 7.34	1,230 1,160 1,800	1962	June 13, 1962 June 20, 1962	6.91 7.25	1,630 1,810
1956	June 1, 1956	7.77	2,030				

2790. Rock Creek near Mountain Home, Utah

<u>Location</u>.--Lat 40°29'30", long 110°34'40", in $SW_{\overline{1}}^{\frac{1}{4}}$ sec.9, T.1 N., R.6 W., Uinta meridian,on right bank at Lower Stillwater damsite "B," a third of a mile upstream from Corral Creek, 7 miles downstream from South Fork, and 12 miles northwest of Mountain Home.

Drainage area. -- 149 sq mi.

Gage. -- Nonrecording at site 300 ft upstream at different datum prior to Apr. 12, 1939; recording thereafter. Altitude of gage is 7,250 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 1,600 cfs and extended above.

Remarks.-No diversion above station. Base for partial-duration series, $\overline{1,200}$ cfs.

Peak stages and discharges of Rock Creek near Mountain Home, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	June 4, 1938	11.19	al,790	1950	June 7, 1950	5.13	1,670
1939	May 16, 1939	4.09	745		June 16, 1950	5.10	1,630
1940	May 16, 1940	4.71	1,200	1951	May 29, 1951 June 17, 1951	4.89 5.34	1,520 1,810
1941	May 26, 1941 June 18, 1941	4.93 5.06	1,530 1,690	1952	June 10, 1952	5.81	2,350
	1		1	1953	June 14, 1953	6.02	2,390
1942	June 8, 1942 June 11, 1942	5.25 5.25	1,730 1,730	1954	May 20, 1954	4.66	1,230
1943	May 30, 1943	4.94	1,340	1955	June 9, 1955	4.96	1,460
1944	June 1, 1944 June 21, 1944	4.79 4.90	1,230 1,310	1956	June 2, 1956	5.49	1,990
	June 26, 1944	5.32	1,630	1957	June 8, 1957 June 28, 1957	5.72 5.07	2,360 1,690
1945	June 22, 1945	4.59	1,230				· ·
1946	June 6, 1946	4.68	1,330	1958	May 28, 1958 June 7, 1958	5.15 4.94	1,710 1,510
1947	May 27, 1947 June 8, 1947	4.67 4.71	1,290	1959	June 8, 1959	4.74	1,400
	Julie 0, 1947		1,330	1960	June 3, 1960	4.75	1,380
1948	May 24, 1948	4.81	1,310	1961	May 28, 1961	3.97	830
1949	June 19, 1949	5.73	2,170	1301	May 28, 1961	3.9/	830
1950	June 2, 1950	4.90	1,470	1962	June 14, 1962 June 21, 1962	4.79 5.00	1,470 1,610
	nual peak only	±.50	1,410	Ш) oute 21, 1302		1,010

a Annual peak only.

2795. Duchesne River at Duchesne, Utah

<u>Location</u>.--Lat 40°09'55", long 110°23'50", in $SW^{\frac{1}{4}NE^{\frac{1}{4}}}$ sec.1, T.4 S., R.5 W., Uinta meridian, on left bank at Duchesne, a quarter of a mile upstream from Strawberry River.

Drainage area. -- 660 sq mi, approximately.

Gage. -- Nonrecording prior to Oct. 18, 1934, at site 2,200 ft upstream at different datum; recording thereafter. At site 1,000 ft upstream at datum 4.6 ft higher Oct. 18, 1934, to Sept. 11, 1952. Altitude of gage is 5,500 ft (by

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Diversions above station for irrigation; peak discharges not materially affected. Base for partial-duration series, 1,400 cfs. Only annual peaks are shown prior to 1935.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 10, 1918	7.4	2,740	1936	May 31, 1936	5.20	3,270
1919	May 29, 1919	6.85	2,180	[[June 13, 1936	4.19	1,710
1920	June 10, 1920	7.4	2,820	1	July 12, 1936	3.98	1,450
	_			1	Aug. 1, 1936	4.04	1,520
1921	June 13, 1921	8.40	4,060		Aug. 4, 1936	4.13	1,630
1922	June 10, 1922	8.65	4,420	l	Sept. 3, 1936	4.43	2,120
1923	June 12, 1923	8.42	3,530	1	-		-
1924	May 19, 1924	2.65	2,180	1937	May 18, 1937	5.05	3,040
1925	May 25,29, 1925	2.45	1,840	li	June 29, 1937	4.36	1,970
				l}	July 8, 1937	4.05	1,570
1926	May 22,24,1926	2.80	2,430		-		
1927	June 10, 1927	3.08	2,910	1938	May 17, 1938	4.01	1,610
1928	June 2, 1928	3.50	3,450	ļ	June 4, 1938	5.17	3,400
1929	June 16, 1929	3.25	2,600	l	Sept. 8, 1938	4.22	1,750
1930	June 12, 1930	3.15	2,420	1			-
	-		-	1939	May 11, 1939	3.87	1,310
1931	May 16, 1931	2.28	978				
1932	June 17, 1932	3.60	3,460	1940	May 16, 1940	4.35	2,330
1933	June 11, 1933	3.40	2,210				
1934	May 9, 1934	2.42	573	1941	May 14, 1941	4.29	1,860
					May 18, 1941	4.28	1,840
1935	June 14, 1935	5.37	3,580		May 24, 1941	5.05	3,160
			-		June 18, 1941	4.53	2,230
1936	May 20, 1936	4.85	2,670				

Peak stages and discharges of Duchesne River at Duchesne, Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	May 27, 1942 June 11, 1942	4.67 4.89	2,260 2,580	1951	May 28, 1951 June 17, 1951	6.08 5.77	3,130 3,120
1943	May 3, 1943 May 30, 1943 June 11, 1943 June 21, 1943	4.48 4.88 4.08 4.47	1,990 2,570 1,530 2,120	1952	May 7, 1952 May 16, 1952 June 7, 1952 June 27, 1952	5.02 5.24 6.30 4.62	1,930 2,210 4,240 1,910
	June 30, 1943	4.25	1,820	1953	June 14, 1953	5.13	4,020
1944	May 17, 1944 June 1, 1944 June 16, 1944	4.22 4.81 4.49	1,660 2,520 2,040	1954	May 20, 1954	3.47	1,270
	June 21, 1944 June 26, 1944	4.68 5.11	2,330 3,000	1955	Oct. 8, 1954 May 23, 1955 June 9, 1955	3.63 3.98 4.10	1,800 1,900 2,080
1945	June 5, 1945 June 14, 1945 June 22, 1945	4.24 4.14 4.53	1,660 1,460 1,910	1956	June 2, 1956	4.82	3,140
1946	May 7, 1946 May 22, 1946	4.12 4.11	1,530 1,510	1957	June 8, 1957 June 28, 1957	4.92 4.32	3,620 2,690
	June 6, 1946	4.72	2,390	1958	May 28, 1958 June 7, 1958	4.84 4.07	3,3 <u>4</u> 0 2,270
1947	May 9, 1947 May 27, 1947 June 9, 1947 June 20, 1947	4.75 4.88 4.86 4.53	2,110 2,270 2,240 1,850	1959	June 8, 1959 July 14, 1959 Aug. 20, 1959	3.42 3.90 3.41	1,480 2,090 1,590
1948	May 24, 1948	5.08	2,400	1960	Jan. 16, 1960 June 4, 1960	a6.00 3.27	1,430
1949	May 18, 1949 May 30, 1949 June 20, 1949	4.32 4.84 5.63	1,560 2,090 3,060	1961	Aug. 26, 1961	2.72	940
	July 3, 1949	5.01	2,110	1962	Dec. 14, 1961 May 11, 1962	a5.18 3.61	1,960
1950	June 2, 1950 June 7, 1950 June 16, 1950	6.13 6.31 6.06	3,170 3,140 2,790		June 3, 1962 June 14, 1962 June 21, 1962	3.15 3.81 3.89	1,440 2,120 2,180

a Backwater from ice.

2850. Strawberry River near Soldier Springs, Utah

Location. --Lat 40°08'10", long lll°01'40", in $NW_{\pm}^{1}NW_{\pm}^{1}$ sec.16, T.4 S., R.10 W., Uinta meridian, on left bank half a mile downstream from Stinking Springs, $2\frac{1}{\pi}$ miles upstream from Willow Creek, and 3 miles south of Soldier Springs.

Drainage area. -- 212 sq mi, of which 170 sq mi is noncontributing.

Gage.--Recording. At datum 0.2 ft lower prior to Aug. 16, 1948. Datum of gage is 7,369.3 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation.--1942-51: Defined by current-meter measurements below 230 cfs.

1951-62: Defined by current-meter measurements below 550 cfs and extended above by logarithmic plotting.

Remarks.--Water is diverted from Strawberry Reservoir, 7 miles upstream to the Great Basin. Water is seldom released from reservoir into Strawberry River. Peak discharges from contributing area not materially affected by storage or regulation. Base for partial-duration series, 170 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1943	Apr. 18, 1943	2.91	279	1948	Apr. 29, 1948	2.52	165				
1944	May 7, 1944	3.18	370	1949	Apr. 24, 1949	2.95	356				
1945	May 5, 1945 Aug. 3, 1945	3.10 2.54	335 176	1950	Apr. 22, 1950	3.22	458				
1946	Apr. 20, 1946	3.42	453	1951	Apr. 15, 1951	2.59	243				
1947	Apr. 20, 1947	2.48	165	1952	May 4, 1952 May 14, 1952	3.84 3.18	1,020 504				

Peak stages and discharges of Strawberry River near Soldier Springs, Utah--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 21, 1952 June 2, 1952	2.78	306 205	1955	Apr. 25, 1955	2.93	368
1953	Apr. 23, 1953	2.75	302	1956	Apr. 19, 1956	2,60	243
1954	Apr. 17, 1954	2.58	246				

2870. Currant Creek below Red Ledge Hollow, near Fruitland, Utah

<u>Location</u>.--Lat 40°19'30", long 111°02'40", in NW $_{\overline{4}}^1$ sec.8, T.2 S., R.10 W., Uinta meridian, on right bank 600 ft downstream from Red Ledge Hollow and $13\frac{1}{2}$ miles northwest of Fruitland.

Drainage area. -- 48 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,540 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 420 cfs.

Remarks.--Currant Creek feeder canal, constructed by Bureau of Reclamation in 1936, diverts water from headwaters to Strawberry Reservoir, from which it is diverted through Strawberry tunnel to the Great Basin for irrigation in Strawberry Valley project. Peak discharges may be affected. Base for partial-duration series, 150 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 20, 1946 Apr. 24, 1946	3.25 3.29	245 252	1953	May 28, 1953	2.10	150
1947	May 3, 1947	3.65	326	1954	Apr. 24, 1954	1.79	108
1948	May 6, 1948	2.77	157	1955	May 6, 1955	2.67	286
-010	May 17, 1948	3.05	207	1956	May 6, 1956	2.66	261
1949	Apr. 24, 1949 Apr. 27, 1949 May 2, 1949 May 11, 1949	3.10 3.23 3.21 3.12	269 307 301 275	1957	May 8, 1957 May 19, 1957 June 1, 1957	2.28 2.12 2.49	189 . 165 254
1950	May 18, 1949	3.00	243	1958	May 11, 1958 May 20, 1958	2.87 2.81	342 325
1950	Apr. 23, 1950 May 16, 1950 May 22, 1950	3.43 3.68 3.67	415 520 516	1959	May 12, 1959	1.50	72
	May 30, 1950	3.42	411	1960	May 10, 1960	2.07	158
1951	(a) May 20, 1951	2.60 2.88	173 2 4 2	1961	May 1, 1961	1.29	50
1952	May 2, 1952 May 13, 1952 May 20, 1952 May 29, 1952	3.93 3.40 2.80 2.70	688 550 395 370	1962	Apr. 24, 1962 May 5, 1962 May 30, 1962	2.79 3.12 1.96	323 410 153

a Occurred during period Apr. 19 to May 17, 1951.

2875. Water Hollow near Fruitland, Utah

Location.--Lat 40°14'30", long 110°58'40", in $SW^{\frac{1}{4}}_{\frac{1}{4}}SE^{\frac{1}{4}}_{\frac{1}{4}}$ sec.2, T.3 S., R.10 W., Uinta meridian, on left bank, $l^{\frac{1}{2}}_{\frac{1}{2}}$ miles upstream from mouth and $7^{\frac{1}{2}}_{\frac{1}{2}}$ miles northwest of Fruitland.

Drainage area. -- 15 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,110 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 56 cfs and extended above on basis of slope-area measurement at 133 cfs.

Remarks. -- No diversion above station. Base for partial-duration series, 15 cfs.

Doole	*****	~~4	dischanges
reak	stages	and	discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 29, 1946 May 10, 1946	1.61 1.61	13 13	1954	Aug. 4, 1954 Sept. 2, 1954 Sept. 26, 1954	2.17 1.60 1.82	55 21 35
1947	May 6, 1947 Aug. 9, 1947	1.66 1;69	17 18	1955	May 16, 1955	-	8.3
1948	May 20, 1948	1.52	12	1956	May 30, 1956	1.54	16
1949	May 17, 1949	1.66	24	1957	June 10, 1957 Aug. 5, 1957	1.57 1.83	18 32
1950	May 7, 1950 May 26, 1950	a2.60 1.77	- 27	1958	- May 23, 1958	a2.81 1.61	- 28
1951	May 30, 1951 Aug. 3, 1951 Aug. 4, 1951	1.58 1.99 2.15	23 51 65	1959	Dec. 15, 1958 Apr. 9, 1959	a2.75 1.32	- 9.9
1952	Oct. 5, 1951 May 6, 1952 May 15, 1952	1.50 2.15 2.15	17 59 61	1960	Nov. 16, 1959 Sept. 3, 1960	a2.08 1.27	- 5.8
	May 31, 1952 Aug. 26, 1952 Aug. 28, 1952	2.11 1.91 2.59	60 44 104	1961	Jan. 7, 1961 Sept.18, 1961	a2.43 1.40	10
	Sept.11, 1952	1.55	20	1962	- May 13, 1962	a2.36 1.62	- 19
1953	Aug. 14, 1953	2.54	100		May 21, 1962 June 9, 1962	1.52 1.52	15 15
1954	July 18, 1954	3.24	133				

a Backwater from ice.

2880. Currant Creek hear Fruitland, Utah

<u>Location</u>.--Lat 40°12', long 110°54', in $SE_{\overline{4}}^{1}$ sec.21, T.3 S., R.9 W., Uinta meridian, on right bank 10 ft downstream from bridge on U.S. Highway 40, 300 ft downstream from Deep Creek, and $3\frac{1}{2}$ miles southwest of Fruitland.

Drainage area. -- 142 sq mi.

Gage.--Nonrecording prior to Sept. 11, 1938, recording thereafter. At site 200 ft upstream at different datum prior to Aug. 20, 1948. At site 200 ft downstream at datum 1.59 ft lower Aug. 20, 1948, to Aug. 31, 1951. At site 300 ft downstream at different datum Aug. 31, 1951, to Aug. 5, 1952. Altitude of gage is 6,670 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 700 cfs and extended above on basis of one measurement of 1,020 cfs. Relation subject to extensive shifting at extremely high stage.

Remarks.--Currant Creek feeder canal, constructed by Bureau of Reclamation in 1936, diverts water from headwaters of Currant Creek to Strawberry Reservoir, from which it is diverted through Strawberry tunnel to the Great Basin for irrigation in Strawberry Valley project. Peaks discharges may be affected. Base for partial-duration series, 200 cfs. Only annual peaks are shown prior to 1939.

Peak stages and discharges of Currant Creek near Fruitland, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 26, 1935	-	198	1950	Apr. 24, 1950	3.12	507
1936 1937	May 7, 1936 May 15, 1937	2.88 2.84	366 337		May 17, 1950 May 25, 1950 May 31, 1950	3.57 3.14 2.83	795 621 544
1938	May 16, 1938	3.15	370	1951	May 21, 1951	1.85	304
1939	Oct. 5, 1938	2,65	283	1952		2.72	
1940	Sept.20, 1940	2.22	189	1952	May 4, 1952 May 14, 1952 May 30, 1952	2.15	1,260 802 590
1941	May 13, 1941	3.38	441		June 26, 1952	.62	248
	July 26, 1941	5,85	1,040		Aug. 28, 1952	2.08	257
1942	Apr. 23, 1942	2,30	208	1953	Aug. 9, 1953	2.18	242
1943	Apr. 24, 1943 May 3, 1943	3.47 3.47	441 437	1954	Apr. 25, 1954	1,.68	128
	June 1, 1943 Aug. 18, 1943	2.34 3.40	212 401	1955	May 7, 1955	2.15	250
1944	May 15, 1944	3.94	504	1956	Apr. 27, 1956 May 8, 1956	1.92 2.20	202 267
	May 24, 1944 June 2, 1944 June 6, 1944	2.80 2.79 3.10	294 292 351	1957	May 10, 1957 May 19, 1957	1.98 1.97	208 208
1945	May 8, 1945	2.80	294	ł	June 3, 1957	2,13	264
1945	July 19, 1945 Sept. 3, 1945	3.90 3.85	512 502	1958	May 12, 1958 May 21, 1958	2.38 2.38	354 341
1946	Apr. 25, 1946	2.90	328	1959	May 13, 1959	1.47	87
1947	May 4, 1947	3.39	446	1960	May 11, 1960	1.84	164
1948	May 20, 1948 May 21, 1948	2.54 2.55	254 254	1961	Sept.18, 1961	2.12	251
1949	Apr. 30, 1949 May 4, 1949 May 19, 1949	2.90 2.91 2.78	375 378 337	1962	Apr. 20, 1962 Apr. 25, 1962 May 7, 1962	2.14 2.36 2.68	267 344 469

2885. Strawberry River at Duchesne, Utah

Location.--Lat 40°09'40", long 110°24'40", in $SW_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.2, T.4 S., R.5 W., Uinta meridian, on right bank three-quarters of a mile west of Duchesne and $1\frac{1}{2}$ miles upstream from mouth.

 $\underline{\underline{\text{Drainage area.--1,040}}}$ sq mi, approximately (includes 170 sq mi tributary to Strawberry Reservoir).

Gage.--Nonrecording near present site at various datums prior to Oct. 26, 1948; recording thereafter. At datum 1.99 ft higher Oct. 26, 1948, to Aug. 12, 1952, and at datum 0.7 ft higher Aug. 13, 1952, to Aug. 2, 1960. Altitude of gage is 5,510 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements.

Remarks.--Diversions above station for irrigation. Transmountain diversion from Strawberry Reservoir above station to the Great Basin. Peak discharges may be affected by storage or diversions. Base for partial-duration series, 700 cfs. Only annual peaks are shown prior to 1949.

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1909	June 7, 1909	8.3	2,950	1921	May 31, 1921	5.85	1,440				
1910	Apr. 22, 1910	7.0	1,860	1922	May 27, 1922	7.70	3.230				
	Ī	ļ	1	1923	May 27, 1923	8.5	1,670				
1914	May 11, 1914	4.0	1,340	1924	Aug. 14, 1924	7.9	1,310				
1915	May 1, 1915	.95	380	1925	July 2, 1925	7.7	1,200				
1916	May 10, 1916	5.12	1.700	1926	Aug. 10, 1926	7.00	1,270				
1917	June 11, 1917	5.2	1,580	1927	Sept.10, 1927	9.3	2,600				
1918	June 23, 1918	2.8	613	1928	May 9, 1928	8.35	1,660				
1919	May 4, 1919	4.05	760	1929	Sept. 2, 1929	8.30	1,340				
1920	May 23, 1920	6.00	1,570	1930	July 31, 1930	6.90	561				

Peak stages and discharges of Strawberry River at Duchesne, Utah--Continued

Water Wear	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Sept. 5, 1930	6.90	561	1951	July 21, 1951	3.61	840
_	_			ì	Aug. 2, 1951	3.31	724
1931	July 30, 1931	8.30	1,340		Aug. 4, 1951	3.44	772
1932	Aug. 22, 1932	8.70	1,030	1050			
1933 1934	Sept. 9, 1933	8.25	812	1952	May 7, 1952	5.34	3,490
1935	Aug. 10, 1934 Aug. 16, 1935	6.70 8.30	276 780		May 21, 1952	3.18	1,800
1333	Aug. 10, 1555	0.30	/60	1953	July 31, 1953	3.04	826
1936	Sept. 3, 1936	9.70	1,300	1333	July 31, 1333	3.04	• 526
1937	Sept. 2, 1937	7.50	1,360	1954	Sept.26, 1954	3.40	1,000
1938	Sept. 9, 1938	8.20	1,970	1 201	Dopo.20, 1001	0.10	1,000
1939	Mar. 18, 1939	6.80	960	1955	May 12, 1955	2.25	534
1940	Sept.15, 1940	6.30	743		,		
				1956	May 10, 1956	2.59	607
1941	May 13, 1941	7.30	1,240				
1942	Apr. 23, 1942	6.00	599	1957	June 4, 1957	3.24	754
1943	Aug. 7, 1943	7.20	1,500				
1944 1 94 5	May 16, 1944	4.98	1,060	1958	May 12, 1958	3.87	942
1945	Aug. 7, 1945	4.90	1,300		May 23, 1958	3.72	997
1946	July 25, 1946	3.84	823		Sept. 3, 1958	3.02	768
1947	May 5, 1947	3.84	812	1959	July 3, 1959	2.99	732
1948	July 19, 1948	3.24	876	1333	Aug. 20, 1959	3.80	1,070
			0,0		g. 20, 1000	0.00	1,0,0
1949	Apr. 30, 1949	3,93	894	1960	Mar. 8. 1960	a3.02	-
	May 19, 1949	4.09	1,050		May 14, 1960	1.62	260
1950	Apr. 24, 1950	3.47	780	1961	Sept. 9, 1961	4.40	900
	May 23, 1950	3.73	883				
	Sept.19, 1950	3.77	898	1962	Apr. 27, 1962	4.19	988
1951	May 27, 1951	3.12	709		May 11, 1962	4.89	1,080
	Flay 27, 1931	0.14	109				L

a Backwater from ice.

2895. Lake Fork above Moon Lake, near Mountain Home, Utah

Location.--Lat 40°36'00", long 110°31'00", in NW sec.1, T.2 N., R.6 W., Uinta meridian, on right bank 2,000 ft upstream from head of Moon Lake at marimum stage, 2 miles upstream from Brown Duck Creek, and 16 miles northeast of Mountain Home.

Drainage area. -- 78 sq mi, approximately.

<u>Gage.</u>--Recording. At site $2\frac{1}{2}$ miles upstream at different datum April 1933 to September 1934. At datum 1 ft higher July 13, 1942, to July 26, 1949. Altitude of gage 1s 8,180 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended above.

 $\underline{\underline{\text{Remarks.}}\text{--No}}$ diversion or regulation above station. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

	reak stages and discharges									
Water	Date	Qage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1933	June 3, 1933	-	a403	1949	June 13, 1949 June 16, 1949	3.62 3.85	1,660 1,820			
1934	Apr. 24, 1934	-	a295	ll	0 44.0 20, 1010	- 0.00	1,020			
1943	June 25, 1943	2.83	934	1950	June 1, 1950 June 6, 1950 June 11, 1950	3.72 3.84 3.62	1,140 1,230 1,060			
1944	June 20, 1944 June 26, 1944	3.38 4.27	1,530 2,700		June 16, 1950	3.72	1,140			
	July 1, 1944	3.02	1,150	1951	May 30, 1951 June 16, 1951	3.46 4.09	1,040 1,550			
1945	June 21, 1945	3.02	1,100	1952	June 6, 1952	4.27	1,600			
1946	June 5, 1946	2.89	1,210		· ·					
1947	June 7, 1947	2.74	3 040	1953	June 13, 1953	4.90	2,380			
1947	June 7, 1947	2.74	1,040	1954	May 19, 1954	3.12	892			
1948	May 23, 1948	2.97	1,200	1955	June 8, 1955	3,85	1,290			

a Maximum daily.

2915. Yellowstone Creek below Swift Creek, near Altonah, Utah

Location.--Lat 40°35'50", long 110°20'50", in SE_{μ}^{1} sec.4, T.2 N., R.4 W., Uinta meridian, on left bank a quarter of a mile downstream from Swift Creek and • $13\frac{1}{2}$ miles north of Altonah.

Drainage area. -- 99 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,990 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 1,300 cfs.

Remarks.--No diversions above station. Peaks are principally from snowmelt. Base for partial-duration series, 700 cfs.

Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May 31, 1950 June 6, 1950 June 11, 1950	4.64	1,020 1,030 933	1953 1954	June 13, 1953 May 22, 1954	5.38 4.32	1,310 630
1951	May 27, 1951 June 16, 1951	4.58 4.74	951 1,130	1955	June 8, 1955	4.77	939
1952	June 6, 1952	5.21	1,400	l			

2925. Yellowstone Creek near Altonah, Utah

Location. --Lat 40°31'00", long 110°20'30", in $SW_{1}^{1}NE_{1}^{1}$ sec.4, T.1 N., R.4 W., Uinta meridian, on left bank l_{2}^{1} miles downstream from powerplant of Moon Lake Electric Association, Inc., 2 miles downstream from Hell Canyon, 5 miles upstream from mouth, and $8\frac{1}{4}$ miles northwest of Altonah.

Drainage area. -- 131 sq mi.

Gage .-- Recording. Altitude of gage is 7,430 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,200 cfs.

Remarks .-- No diversion above station. Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 22, 1945	3.38	867	1953	June 13, 1953	3.82	1,360
1946	June 5, 1946	3.17	739	1954	May 22, 1954	2.97	652
1947	May 9, 1947 May 27, 1947	3.27 3.40	786 875	1955	June 8, 1955	3.18	799
	June 8, 1947 June 20, 1947	3.41 3.35	882 840	1956	June 1, 1956	3,47	1,170
1948	May 19, 1948 June 2, 1948	3.17 3.15	720 707	1957	June 6, 1957 June 27, 1957	3.65 3.28	1,240 893
1949	June 13, 1949 June 19, 1949	4.04 4.55	1,380 1,880	1958	May 28, 1958 June 7, 1958	3.40 3.50	1,050 1,140
1950	June 2, 1950	3.71	1,070	1959	June 8, 1959	2.73	658
	June 6, 1950 June 12, 1950	3.62 3.48	988 917	1960	June 2, 1960	2.75	664
1951	May 28, 1951	3,58	996	1961	Sept.18, 1961	2.59	549
	June 16, 1951	3.76	1,110	1962	Dec. 23, 1961 June 14, 1962	a3.64 3.22	1,020
1952	June 6, 1952	3.97	1,440		June 20, 1962	3.41	1,180

a Backwater from ice.

2950. Duchesne River at Myton, Utah (Published as "at Price Road bridge" prior to 1903)

<u>Location</u>.--Lat 40°12'00", long 110°03'40", in $SM_{\overline{u}}^1SM_{\overline{u}}^1$ sec.24, T.3 S., R.2 W., Uinta meridian, on left bank at Myton, 3 miles downstream from Lake Fork.

Drainage area. -- 2,750 sq mi.

<u>Gage.</u>--Nonrecording at several sites within half a mile of present site at various datums prior to Oct. 14, 1933; recording thereafter. Datum of gage is 5,061.40 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation.--Defined}}$ by current-meter measurements below 8,000~cfs.

Remarks. -- Peak discharges materially affected by regulation and diversions.

Flow regulated by several reservoirs. Large diversions above station for irrigation, including transmountain diversions to the Great Basin through Duchesne and Strawberry tunnels, Hobble Creek ditch, and Strawberry River and Willow Creek ditches. Only maximum annual observed discharges shown prior to 1934; annual peaks shown thereafter.

Water year Date Gage height (feet) Discharge (cfs) Water year Date Date height (feet) Discharge (cfs) 1901 May 20, 1901 - 6,680 1935 June 3, 1933 4.50 2,480 1905 June 9, 1903 - 5,820 1934 June 1, 1935 5.96 4,340 1904 May 25, 1904 9.50 6,080 1937 June 1, 1936 5.26 3,870 1906 June 14, 1906 - 7,320 1938 May 16, 1937 5.65 4,140 1907 June 15, 1908 9.25 4,670 1940 Sept.29, 1940 3.980 1909 June 6, 1909 10.55 8,080 1938 May 11, 1939 - 1,190 1909 June 15, 1912 7.0 6,390 1944 June 18, 1940 3.98 1,980 1912 June 8, 1912 7.0 6,390 1945 June 18, 1944 5.70 4,610 1914 June 10, 1918 5.6 4,440								
1902		Date	height			Date	height	
1903		May 20, 1901		6,680	1933	June 3, 1933	4.50	2,480
1904 May 25, 1904 9.50 6,080 1936 June 1, 1936 5.26 3,870			-		1934	Aug. 10, 1934	2.52	527
1905					1935	June 14, 1935	5.96	4,340
1906			9.50		{ {	İ	1	
1906	1905	June 9, 1905	-	5,150				
1907	3000		ł					
1908 June 15, 1908 9.25 4,670 1940 3.98 1,980			30.00					
1909 June 6, 1909 10.35 8,080 1910 May 12, 1910 8.35 5,540 1941 June 18, 1941 5.70 4,610 1912 June 8, 1912 7.0 6,390 1943 June 2, 1943 4.66 2,860 1913 June 3, 1914 6.8 6,240 1945 June 5, 1945 4.13 1,990 1915 June 12, 1915 5.39 3,960 1945 June 5, 1945 4.13 1,990 1915 June 12, 1915 5.70 4,560 1947 May 9, 1947 4.80 2,780 1917 June 22, 1917 7.4 9,690 1948 May 24, 1948 4.59 2,400 1918 June 10, 1918 5.70 4,790 1949 June 20, 1949 6.85 6,450 1919 May 21, 24, 1919 5.0 3,560 1950 June 3, 1950 5.43 3,720 1920 June 10, 1922 7.84 12,800 1952 June 13, 1923 June 10, 1922 7.94 12,800 1953 June 14, 1953 6.09 4,350 1925 May 21, 1925 4.35 2,550 1955 June 2, 1956 5.62 3,230 1926 May 21, 1926 5.34 3,570 1956 June 2, 1956 5.62 3,230 1928 Moy 21, 1926 5.34 3,570 1959 June 2, 1956 5.62 3,230 1928 Moy 22, 1927 6.2 4,980 1959 June 8, 1957 6.04 4,150 1928 Moy 24, 1927 6.2 4,980 1959 June 8, 1957 6.04 4,150 1928 Moy 24, 1927 6.2 4,980 1959 June 16, 1929 5.55 3,750 1960 June 12, 1930 5.90 4,270 June 4, 1960 ~ 1,060 1931 May 18, 1931 3.38 1,180 1961 Sept.18, 1961 3.76 1,020								
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1931 May 18, 1931 3.38 1,180 1961 Sept.18, 1961 3.76 1,020					1960			
	1930	June 12, 1930	5.90	4,270		June 4, 1960	_	1,060
	1931	May 18, 1931	3,38	1,180	1961	Sept.18, 1961	3.76	1,020
	1932		-					3,700

a Backwater from ice.

2960. Uinta River above Clover Creek, near Neola, Utah

<u>Location</u>.--Lat 40°37'50", long 110°09'30", in $NW^{\frac{1}{4}}$ sec.30, T.3 N., R.2 W., Uinta meridian, on left bank 2 miles upstream from Clover Creek and 15 miles northwest of Neola.

Drainage area. -- 132 sq mi.

 $\underline{\tt Gage.\textsc{--}Recording.}$ At different datum prior to June 27, 1952. Altitude of gage is 7,750 ft (from river-profile map).

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 1,500 cfs and extended above by logarithmic plotting.

Remarks.--No diversion above station. Flow partly regulated by several small mountain lakes and reservoirs, including Fox Lake, Crescent Lake, Atwood Lake, and Chain Lake (total capacity, about 3,600 acre-ft). Peak discharges not materially affected by storage. Base for partial-duration series, 600 cfs.

000	, сть.		Peak stages a	and disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 26, 1946	3.40	638	1950	June 11, 1950	3.00	826
1947	May 8, 1947 May 22, 1947 May 26, 1947 June 8, 1947	4.25 3.85 4.05 4.12	1,040 811 928 956	1951	May 27, 1951 June 15, 1951 Aug. 4, 1951	3.95 3.40 2.84	1,530 1,070 691
	June 19, 1947	3.93	868	1952	May 7, 1952 May 14, 1952	2.69 2.98	704 907
1948	May 17, 1948 May 19, 1948 June 2, 1948	3.76 4.10 3.67	764 944 729		June 6, 1952 Aug. 10, 1952	4.65 3.15	2,060 767
1949	May 29, 1949	3.68	751	1953	June 12, 1953	5,34	2,070
	June 18, 1949 July 4, 1949	5.10 2.94	2,300 767	1954	May 22, 1954	3.34	928
1950	May 24, 1950 June 1, 1950 June 6, 1950	3.17 3.57 3.28	1,020 1,310 1,040	1955	May 13, 1955 May 22, 1955 June 8, 1955	2.85 2.87 3.65	606 638 1,080

2965. Clover Creek near Neola, Utah

Location.--Lat 40°37'30", long 110°07'50", in $SE_{\pi}^{\frac{1}{4}}$ sec.29, T.3 N., R.2 W., Uinta meridian, on right bank three-quarters of a mile upstream from mouth and 14 miles northwest of Neola.

Drainage area. -- 9.5 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 7,900 ft (from topographic map).

Stage-discharge relation .- - Defined by current-meter measurements below 58 cfs.

 $\underline{\underline{\text{Remarks}}}$.-No diversion above station. Peaks are principally from snowmelt. $\underline{\underline{\text{Base}}}$ for partial-duration series, 50 cfs.

	rear boages and association									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1951	May 27, 1951	2.68	120	1953	June 12, 1953	2.32	21			
1952	May 14, 1952 May 29, 1952	2.46 2.51	62 75	1954	May 9, 1954	2.44	45			
	June 5, 1952	2.56	51	1955	May 11, 1955	2.40	39			

2970. Uinta River near Neola, Utah

<u>Location</u>.--Lat 40°32'10", long 110°04'00", in $SW_{\frac{1}{u}}$ sec.25, T.2 N., R.2 W., Uinta meridian, on left bank 300 ft downstream from bridge, three-quarters of a mile upstream from Pole Creek, and 7 miles north of Neola.

Drainage area. -- 181 sq mi.

<u>Gage</u>.--Nonrecording or recording at several sites within 2,000 ft of present site at various datums prior to Aug. 4, 1951. At datum 1.14 ft higher Aug. 4, 1951, to Aug. 11, 1952. Altitude of gage is 6,910 ft (from riverprofile map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below}\\ \underline{2,000~\text{cfs.}}$

Remarks. --Water diverted from Pole Creek and Uinta River and used at Uinta
Power & Light Co's powerplant enters river about 1,000 ft above station.
Uinta Power Canal diverts from river 6 miles above station. Enlargement of
canal completed in August 1944. Flow through canal increased Oct. 12-13,
1944, and held nearly constant thereafter. Summer flow slightly regulated
by storage in several small mountain lakes and reservoirs. Peak discharges
not materially affected by regulation or diversion. Base for partialduration series, 700 cfs. Only annual peaks are shown prior to 1930.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	May 21, 1925	2.70	1,000	1945	May 12, 1945 June 22, 1945	3.71 3.98	729 924
1926 1927	May 21, 1926 May 17, 1927	2.70 2.72	1,020 1,090	1946	Apr. 27, 1946	3.55	620
1930	May 30, 1930 June 8, 1930 June 19, 1930	2.70 2.65 2.07	1,080 1,050 724	1947	May 8, 1947 May 27, 1947 June 9, 1947 June 20, 1947	4.55 4.17 4.23 3.99	1,430 1,080 1,140 956
1931 1932	May 15, 1931 May 21, 1932	2.80	593 1,390	1948	May 19, 1948 June 3, 1948	4.26 3.79	1,200 822
	May 29, 1932 June 16, 1932 June 24, 1932	2.02 2.20 2.37	715 842 970	1949	May 29, 1949 June 12, 1949 June 18, 1949	3.60 4.73 5.57	1,020 1,660 2,520
1933	June 1, 1933 June 10, 1933 July 8, 1933	2.80 2.37 2.20	1,370 1,010 870	1950	July 4, 1949 May 25, 1950	3.92 4.76	873 1,090
1934	May 7, 1934	1.18	224		May 31, 1950 June 7, 1950	4.96 4.60	1,210 1,040
1935 19 36	June 10, 1935	2.75	1,320	1951	May 27, 1951 June 17, 1951	5,26 4.14	1,470 1,010
1937	May 15, 1936 May 14, 1937	2.06	762 1,050	1952	May 7, 1952 May 14, 1952 June 7, 1952	2.06 2.26 2.93	844 988 2,110
1938	May 16, 1938 May 29, 1938 June 5, 1938	1.90 2.55 3.33	705 1,390 2,240	1953	June 13, 1953	4.78	2,200
1070	June 29, 1938	2.43	795	1954	May 22, 1954	3,63	856
1939 1940	Sept.13, 1939 May 10, 1940	3.01 2.41	1,130 714	1955 1956	June 9, 1955	3.67	886 1,270
1941	May 13, 1941 May 18, 1941 May 27, 1941	2.93 2.70 3.35	1,110 886 1,380	1957	June 2, 1956 June 8, 1957 June 28, 1957	4.21 4.90 4.23	2,020 1,170
	June 4, 1941 June 18, 1941	3.18 3.85	1,190 1,760	1958	May 28, 1958 June 7, 1958	4.97 4.75	1,940 1,930
1942	May 26, 1942 June 7, 1942	3.53 3.58	1,450 1,490	1959	June 7, 1959	3.95	1,100
1943	May 2, 1943 May 29, 1943	2.85 2.66	860 717	1960	May 13, 1960 June 3, 1960	3.91 3.62	1,070 870
1944	May 17, 1944 May 31, 1944	2.66 3.48	703 1,380	1961 1962	Sept.18, 1961 May 11, 1962	3.98 3.90	1,140 1,160
	June 7, 1944 June 21, 1944 June 26, 1944	3.13 3.85 5.20	1,070 1,740 3,320		June 4, 1962 June 14, 1962 June 21, 1962	3.69 4.70 4.83	732 1,760 1,930

2980. Farm Creek near Whiterocks, Utah

 $\frac{\text{Location.}\text{--Lat }40°34'10", \text{long }109°57'40", \text{in }SE_{h}^{1}\text{ sec.}14\text{, }T.2\text{ N., }R.1\text{ W., }\text{Uinta meridian, }\text{on right }\text{bank }0.7\text{ mile upstream from Hominy Creek }\text{and }7\text{ miles northwest }\text{of Whiterocks.}$

Drainage area. -- 22 sq mi, approximately.

Gage.--Recording gage and concrete control. Altitude of gage is 7,040 ft (by barometer).

Stage-discharge relation .-- Defined by current-meter measurements below 85 cfs.

Remarks. -- No diversion above station. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges

				_		_		
Water year		Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	May	24, 1950	2.83	154	1957 1958	June 4, 1957 May 26, 1958	3.78 3.54	200 183
1951	May	25, 1951	3.05	204	1959	May 15, 1959	2.37	23
1952	May	14, 1952	2.66	125	1960	May 10, 1960	2.60	_
1953	May	28, 1953	1.88	29	İ		ĺ	
1954	May	9, 1954	2.26	71	1961	May 21, 1961	2.15	8.2
1955	May	11, 1955	2.70	39	1962	May 10, 1962	3.25	120
1956	May	17, 1956	2.86	53				

2985. Whiterocks River above Paradise Creek, near Whiterocks, Utah

Location.--Lat 40°38'10", long 109°58'00", in $SW_{\frac{1}{4}}$ sec.23, T.3 N., R.1 W., Uinta meridian, on right bank $2\frac{3}{4}$ miles upstream from Paradise Creek and 12 miles northwest of Whiterocks.

Drainage area. -- 90 sq mi, approximately.

Gage.--Recording. At datum 1.0 ft lower prior to Oct. 1, 1950. Altitude of gage is 7,800 ft (from river-profile map).

Stage-discharge relation.--1945-50: Defined by current-meter measurements below 820 cfs and extended above by logarithmic plotting.

1950-55: Defined by current-meter measurements below 1,200 cfs and extended above by logarithmic plotting.

 $\underline{\text{Remarks}}$.--No diversion above station. Base for partial-duration series, $\underline{500}$ cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 5, 1946	3.23	484	1951	May 27, 1951 June 15, 1951	3.48 2.67	1,600 750
1947	May 8, 1947 May 20, 1947	3.95 3.90	1,100 1,050		Aug. 4, 1951	3.15	1,290
	June 8, 1947 June 20, 1947	3.68 3.57	822 725	1952	May 6, 1952 May 14, 1952 June 6, 1952	2.53 2.73 3.77	667 797 1,700
1948	May 19, 1948 June 2, 1948	4.07 3.51	1,200 668		June 27, 1952 July 27, 1952	2.56 2.52	642 617
1949	May 29, 1949 June 11, 1949	3.68 4.33	824 1.630	1953	June 12, 1953	3.50	1,240
	June 18, 1949	4.42	1,780	1954	May 22, 1954	2.72	667
1950	May 24, 1950 May 31, 1950 June 6, 1950	3.77 4.20 3.94	879 1,250 975	1955	May 13, 1955	2.50	588

2995. Whiterocks River near Whiterocks, Utah

Location.--Lat 40°34'00", long 109°55'40", in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.18, T.2 N., R.1 E., Uinta meridian, on left bank three-quarters of a mile upstream from heading of United States Whiterocks Canal and $6\frac{1}{2}$ miles north of Whiterocks.

Drainage area. -- 115 sq mi.

Gage.--Nonrecording near present site at various datums prior to Nov. 8, 1917; recording thereafter, at several sites within 1 mile of present site at various datums to Nov. 7, 1949. Recording at present site and datum since Nov. 7, 1949. Altitude of gage is 6,980 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs and extended above.

Remarks.--Flow slightly regulated by small mountain lakes. One small diversion for irrigation above station. Peak discharges not materially affected by diversion or regulation. Base for partial-duration series, 600 cfs. Only annual peaks are shown prior to 1918.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1902 1903	May 1902 June 3, 1903	-	1,100 1,150	1938	May 16, 1938 June 2, 1938	2.97 4.60	665 1,600
1909	June 5, 1909 June 7, 1909	5.5 -	- 2,020	1939	May 1939	2.85	514
1918	July 13, 1918	5.58	594	1940	May 3, 1940	3.00	535
1919	May 14, 1919	5.38	560	1941	May 13, 1941 May 17, 1941 May 23, 1941	3.68 3.30 3.98	992 736 1,270
1920	May 29, 1920 June 8, 1920	7.04 6.83	1,490 1,360		June 18, 1941	3.62	994
1921	June 1921	-	1,700	1942	May 26, 1942 June 8, 1942	3.94 4.18	1,330 1,310
1922	June 8, 1922 June 20, 1922	5.20 5.40	2,550 2,750	1943	May 2, 1943	3.47	718
1923	June 21, 1922 May 27, 1923	5,40 3,63	2,750 1,440	1944	May 31, 1944 June 7, 1944 June 26, 1944	4.10 3.95 4.95	1,300 1,080 2,100
1010	June 12, 1923 June 27, 1923	4.52 3.13	2,500 860	1945	May 13, 1945	3.17	556
1924	May 16, 1924	3.13	653	1946	Apr. 26, 1946	3,10	504
1925	May 8, 1925 May 21, 1925 June 10, 1925	2.87 3.19 3.06	606 920 780	1947	May 8, 1947 May 20, 1947 June 8, 1947	3.94 3.85 3.53	1,130 1,040 778 710
1927	May 26, 1927 June 12, 1927 June 28, 1927 Sept. 9, 1927	3.37 3.10 3.70 3.80	870 610 1,240 1,360	1948	June 20, 1947 May 19, 1948 June 2, 1948	3.43 4.25 3.56	1,260 697
1930	Sept.17, 1927 May 28, 1930	3.18	1,190	1949	May 29, 1949 June 12, 1949 June 18, 1949	3.65 4.42 4.70	896 1,660 1,880
1000	June 7, 1930	3.55	953	1950	May 25, 1950	3.45	890
1931	May 14, 1931	2,60	402		June 1, 1950 June 6, 1950	3.82 3.35	1,330 955
1932	May 21, 1932 May 29, 1932 June 4, 1932 June 16, 1932	4.10 3.16 2.87 2.98	1,840 883 670 746	1951	May 27, 1951 June 16, 1951 Aug. 4, 1951	4.07 3.00 3.62	1,660 712 1,160
1933	June 1, 1933 June 10, 1933 July 8, 1933	4.27 3.11 3.25	1,970 746 851	1952	May 6, 1952 May 14, 1952 June 5, 1952	3.13 3.23 4.59	818 875 1,770
1934	Aug. 16, 1934	1.82	205	1953	June 12, 1953	3.47	1,190
1935	June 1935	-	1,300	1954	May 22, 1954	2.88	742
1936	May 14, 1936	3.10	850	1955	May 13, 1955	2.37	440
1937	May 14, 1937 May 30, 1937	3.98 2.74	1,690 604	1956	May 25, 1956	2.96	972
	June 3, 1937	2.82	658	1957	June 8, 1957	4.18	1,560

Peak stages and discharges of Whiterocks River near Whiterocks, Utah--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	May 27, 1958 June 7, 1958	3.72 2.58	1,740 919	1961	May 27, 1961	2.53	599
1959	June 7, 1959	2.37	493	1962	May 10, 1962 June 3, 1962 June 13, 1962	2.92 2.77 3.24	816 750 1,080
1960	May 12, 1960	2,69	656		June 21, 1962	2.76	786

3010. Dry Gulch near Neola, Utah

Location.--Lat 40°27'50", long 110°09'40", in $SW_{\frac{1}{4}}$ sec.19, T.1 N., R.2 W., Uinta meridian, on right bank 1 1/3 miles above Highline Canal crossing, 7 miles west northwest of Neola, and 8 miles northeast of Altonah.

Drainage area. -- 67 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,800 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 120 cfs and extended above by logarithmic plotting.

Remarks.--Peaks are principally from snowmelt and are not materially affected by diversions. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951 1952 1953 1954 1955	May 30, 1951 Apr. 29, 1952 June 14, 1953 May 23, 1954 May 15, 1955	2.23 4.63 1.66 1.68 1.67	66 381 24 26 23	1956 1957 1958	May 26, 1956 June 9, 1957 May 29, 1958	2.06 2.68 3.02	58 124 177

3020. Duchesne River near Randlett, Utah

<u>Location</u>.--Lat 40°13'00", long 109°47'00", in $SE_{u}^{\frac{1}{4}}SE_{u}^{\frac{1}{4}}$ sec.17, T.3 S., R.2 E., Uinta meridian, on left bank a quarter of a mile downstream from Uinta River, $1_{u}^{\frac{1}{4}}$ miles southeast of Randlett, and $6_{\frac{1}{2}}$ miles southeast of Fort Duchesne.

Drainage area. -- 3,920 sq mi, approximately.

<u>Gage</u>.--Recording. At site 500 ft downstream at different datum prior to Aug. 23, 1944. Altitude of gage is 4,750 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Peak discharges materially affected by regulation and diversions.

Flow regulated by several reservoirs. Large diversions above station for irrigation, including transmountain diversions to the Great Basin through Duchesne and Strawberry tunnels, Hobble Creek ditch, and Strawberry River and Willow Creek ditches. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943 1944	June 2, 1943 June 27, 1944	5.04	4,150 a7,000	1955	May 23, 1955	4.08	1,910
1945	June 6, 1945	4.67	2,840	1956	June 2, 1956	5.22	3,860
1946 1947 1948 1949 1950	June 6, 1946 June 9, 1947 May 20, 1948 June 19, 1949 June 2, 1950	4.07 5.39 4.51 7.55 5.88	1,880 4,270 2,660 8,500 5,520	1957 1958 1959 1960	June 8, 1957 May 30, 1958 Aug. 20, 1959 Mar. 10, 1960 June 4, 1960	6.42 6.68 4.28 b4.77	6,240 6,480 1,780 - 1,010
1951 1952 1953 1954	May 29, 1951 June 7, 1952 June 14, 1953 May 22, 1954	5.48 7.87 5.84 3.76	4,750 8,790 4,910 1,610	1961 1962	Dec. 24, 1960 Sept.19, 1961 Feb. 13, 1962 June 21, 1962	b5.92 b9.03	1,100 4,920

a Maximum daily.

b Backwater from ice.

3024. White River below Trapper's Lake, Colo.

Location. --Lat 39°59'50", long 107°13'50", in sec.2, T.1 S., R.88 W., on right bank 200 ft below Trapper's Lake, 1 mile upstream from Skinny Fish Creek, and 21 miles east of Buford.

Drainage area. -- 21.4 sq mi.

Gage. -- Recording. Altitude of gage is 9,600 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 250 cfs.

Remarks. -- No diversions above station. Peaks are principally from snowmelt. Only annual peaks are shown.

Pools	ntampe	and	discharges
reak	Stages	anu	uischarges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957 1958 1959 1960	July 4, 1957 June 9, 1958 June 15, 1959 June 19, 1960	8.03 7.45 7.06 6.90	481 291 228 198	1961 1962	June 13, 1961 June 28, 1962	6.75 6.87	178 195

3028. White River near Buford, Colo.

Location.--Lat 40°02', long 107°31', in SW_{π}^1 sec.20, T.1 N., R.90 W., on right bank a third of a mile upstream from highway bridge, three-quarters of a mile downstream from Ute Creek, and $6\frac{1}{2}$ miles northeast of Buford.

Drainage area .-- 223 sq mi.

<u>Gage</u>.--Nonrecording at site a third of a mile downstream at different datum prior to October 1956; recording thereafter.

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below } \underline{\text{1,600 cfs}}.$

Remarks.--Diversions above station for irrigation of a few hay meadows do not materially affect peak flows. Peaks are primarily from snowmelt. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year			Water year	. Date	Gage height (feet)	Discharge (cfs)	
1957	June 6, 1957 June 29, 1957	5.18 5.40	1,750 1,950	1960	June 5, 1960	4.42	1,090
	July 17, 1957	4.81	1,420	1961	Jan. 3, 1961 May 11, 1961	a5.28 4.29	- 967
1958	May 11, 1958	4.65	1,280	il.	-		
	May 29, 1958 June 7, 1958	5.02 4.93	1,610 1,530	1962	Apr. 24, 1962 May 12, 1962	4.48 5.12	1,110 1,680
	, 1000	1.00	1,000		June 14, 1962	4.59	1,200
1959	June 8, 1959	4.44	1,070	[[1		,

a Backwater from ice.

3030. White River at Buford, Colo. (Published as North Fork White River near Buford prior to 1952)

<u>Location</u>.--Lat 39°59¹, long 107°37¹, in NW_{π}^{1} sec.9, T.1 S., R.91 W., on right bank 600 ft east of Buford and l_{π}^{1} miles above mouth.

Drainage area .-- 254 sq mi.

Gage, --Nonrecording prior to Oct. 10, 1920; recording thereafter. At site 1½ miles upstream at different datum May 24, 1910, to May 27, 1914. At different datum May 28, 1914, to Dec. 7, 1915, and July 1, 1919, to Oct. 9, 1920. Altitude of gage is 7,010 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1.600 cfs.

Remarks.--Diversions for irrigation of 1,200 acres do not substantially affect peak flows. Peaks principally from snowmelt. Base for partial-duration series, 1,000 cfs.

	Peak stages and discharges											
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)					
1912	May 30, 1912	4.05	3,150	1957	June 6, 1957	-	2,100					
1915	June 20, 1915	1.55	760		June 29, 1957 July 18, 1957	=	2,350 1,400					
1920	May 22, 1920	4.00	2,290	1958	May 11, 1958 May 29, 1958	5.90 6.35	1,500 1,700					
1952	May 5, 1952	6.07	1,430		June 7, 1958	6.29	1,640					
	May 14, 1952 June 10, 1952	5.78 6.65	1,230 1,980	1959	May 13, 1959 June 8, 1959	5.74 5.64	1,120 1,080					
1953	May 28, 1953 June 15, 1953	5.93 6.42	1,400 1,770	1960	May 13, 1960 June 5, 1960	5.77 5.73	1,110					
1954	May 22, 1954	5.05	730		-							
1955	May 14, 1955	5.55	1,050	1961	Jan. 9, 1961 May 11, 1961	a7.22 5.60	1,030					
1956	May 7, 1956 May 22, 1956 June 2, 1956	5.71 5.75 5.78	1,220 1,270 1,290	1962	Apr. 24, 1962 May 12, 1962 June 14, 1962	5.86 6.51 5.68	1,260 1,790 1,110					

a Backwater from ice.

3035. South Fork White River near Buford, Colo.

<u>Location</u>.--Lat 39°55', long 107°33', in $SE^{\frac{1}{4}}$ sec.36, T.1 S., R.91 W., 50 ft upstream from Peltier Creek and 6 miles southeast of Buford.

Drainage area. -- 156 sq mi.

Gage.--Nonrecording July 26, 1903, to Oct. 31, 1906, at same site but different datum and June 25, 1910, to Nov. 30, 1915, at site half a mile upstream at different datum; recording after Oct. 1, 1942.

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 1,600 cfs. Bankfull <u>stage</u>.--5 ft.

Remarks. -- Diversions for irrigation of about 500 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1910-15 furnished by State engineer of Colorado. Base for partial-duration series, 1.200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	June 17, 1906	8.2	3,230	1945	June 15, 1945	4.89	1,270
1914	June 21, 1914	6.6	1,870	1	June 24, 1945	6.03	1,800
1915	June 12, 1915	4.35	1,130	1946	June 8, 1946	5.06	1,350
1943	May 31, 1943 June 23, 1943	4.53 4.65	1,220 1,260	1947	May 28, 1947 June 9, 1947 June 21, 1947 June 29, 1947	4.83 6.00 5.59 4.87	1,240 1,790 1,590 1,280
1944	June 21, 1944	5.09	1,360		buile 25, 154	4.07	1,200

3040. South Fork White River at Buford, Colo.

<u>Location</u>.--Lat 39°58', long 107°38', in $NW_{\frac{1}{n}}^{\frac{1}{n}}$ sec.17, T.1 S., R.91 W., on left bank 300 ft downstream from highway bridge, three-quarters of a mile upstream from mouth, and 1 mile south of Buford.

Drainage area. -- 170 sq mi, approximately.

Gage.--Nonrecording at site 300 ft upstream at different datum prior to Nov. 30, 1920; recording at present site and datum since October 1951. Altitude of gage is 6,970 ft (from topographic map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined}$ by current-meter measurements below 2,700 cfs.

Remarks.--Diversions above station for irrigation of 1,100 acres do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 1,300 cfs.

Peak stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	June 9, 1920	4.25	1,920	1957	June 30, 1957	7.07	a3,000
1952	May 16, 1952 June 11, 1952	5.40 6.90	1,320 2,670	1958	May 30, 1958 June 8, 1958	5.92 6.17	1,850 2,080
1953	June 5, 1953	5.65	1,550	1959	June 9, 1959	6.10	1,850
1954	May 22, 1954	5.37	1,460	1960	June 4, 1960	5.79	1,770
1955	May 26, 1955 June 1, 1955 June 9, 1955	5.30 5.49 6.23	1,330 1,500 2,210	1961	Dec. 30, 1960 June 1, 1961	b5.89 5.44	- 1,390
1956	May 24, 1956 June 3, 1956	5.57 6.06	1,700 2,060	1962	May 13, 1962 June 7, 1962 June 14, 1962 June 22, 1962	5.74 5.80 6.20 5.98	1,640 1,440 1,880 1,710
1957	June 7, 1957	-	a2,000		June EE, 150E	0.50	1,710

a About.

3041. Big Beaver Creek near Buford, Colo.

Location.--Lat 39°58', long 107°39', in NW_{1a}^{1} sec.18, T.1 S., R.91 W., on right bank 165 ft upstream from bridge on County Highway 132, 500 ft upstream from mouth, and 2 miles southwest of Buford.

Drainage area .-- 34.6 sq mi.

Gage . -- Recording.

Stage-discharge relation. -- Defined by current-meter measurements below 390 cfs.

Remarks.--Small diversions above station for irrigation do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 200 cfs.

Water year		Date	е	Gage height (feet)	Discharge (cfs)	Water year	Date		Gage height (feet)	Discharge (cfs)
1956	May	6,	1956	4.25	234	1959	May	13, 1959	3.08	132
1957	June June		1957 1957	4.46 3.51	395 210	1960	May	12, 1960	3.30	186
1958	May		1958	3.55	219	1961	May	25, 1961	2.81	117
1500	May May	11,	1958 1958	3.70 3.86	248 278	1962	May	8, 1962	3.35	270

b Backwater from ice.

3043. Coal Creek near Meeker, Colo.

Location. --Lat 40°05'30", long 107°46'05", in $NE_{\frac{1}{4}}^{\frac{1}{4}}$ sec.1, T.1 N., R.93 W., on right bank 200 ft downstream from unnamed tributary, 300 ft above headgate of ditch, 1.3 miles below Ninemile Draw, and 8 miles northeast of Meeker.

Drainage area .-- 25 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 6,820 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 67 cfs.

Remarks.--Slight regulation by two small storage reservoirs above station. Diversions for irrigation of a few acres of hay meadows above station. Regulation and diversions do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 50 cfs.

	· Peak stages and discharges										
Water year		Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1958	May May May	7, 1958 11, 1958 20, 1958	4.18 4.37 4.56	85 102 101	1961 1962	May 11, 1961 Apr. 20, 1962	3.58	37 76			
1959	May	30, 1959	3.30	23	1902	Apr. 24, 1962 May 8, 1962	4.01 4.11	69 77			
1960	May	13, 1960	3.61	38							

3045. White River near Meeker, Colo. (Published as "at Meaker " 1901-13)

Location.--Lat 40°02'00", long 107°51'35", in NE_u^1 sec.30, T.1 N., R.93 W., on left bank 1 mile upstream from Curtis Creek and $2\frac{1}{2}$ miles east of Meeker.

Drainage area .-- 762 sq mi.

Gage, --Nonrecording prior to Aug. 14, 1910; recording thereafter. At site $\frac{2}{2}$ miles downstream at different datum prior to Oct. 20, 1913. At datum 1.00 ft higher Oct. 20, 1913, to Sept. 30, 1933. Altitude of gage is 6,320 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 4,700 cfs.

Remarks. -- Diversions for irrigation of 15,900 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 2,100 cfs.

			ream buages c	ilia albon	Tear Budges and attornation									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)							
1901	May 21, 1901	6.5	5,000	1920	June 10, 1920	3.55	4,250							
1910	June 1, 1910	-	3,080	1921	May 17, 1921 June 16, 1921	2.95 4.60	3,100 6,370							
1911	May 10, 1911	2.95	2,400		1001	1,00	0,070							
	June 9, 1911	3.40	3,700	1922	May 27, 1922 June 13, 1922	2.74 2.70	2,940 2,880							
1912	June 9, 1912	4.60	4,800	[·									
	June 28, 1912	3.20	2,850	1923	May 27, 1923 June 15, 1923	2.62 2.48	2,920 2,700							
1913	May 30, 1913	3.60	2,350	ł			-							
1914	May 24, 1914 June 21, 1914	3.20 3.05	3,490 3,200	1924	May 18, 1924 June 15, 1924	2.31 3.22	2,350 3,570							
		0	0,200	1925	May 31, 1925	2.21	2,230							
1915	June 12, 1915	2,20	1,780		June 22, 1925	2.40	2,470							
1916	May 10, 1916 June 20, 1916	3.00 2.95	2,920 2,840	1926	May 6, 1926 June 7, 1926	2.28 2.78	2,320 2,960							
1917	May 18, 1917 June 22, 1917	2.60 4.05	2,370 4,940	1927	May 20, 1927 June 19, 1927	2.68 2.51	2,830 2,610							
1918	May 21, 1918 June 15, 1918	2.50 3.50	2,300 3,900	1928	May 2, 1928 May 11, 1928	2.64 3.28	2,780 3,630							
1919	May 30, 1919	2.35	2,080		May 31, 1928	3.21	3,530							

Peak stages and discharges of White River near Meeker, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 26, 1929 June 10, 1929	3.50 3.20	4,550 4,010	1947	May 9, 1947 June 9, 1947 June 21, 1947	3.78 3.68 3.67	3,590 3,330 3,300
1930	June 1, 1930 June 14, 1930	2.45 2.68	2,720 3,110	1948	May 20, 1948 June 3, 1948	3.75 3.73	3,510 3,460
1931	May 18, 1931	2.02	2,010	1949	•		
1932	May 22, 1932 June 26, 1932	2.70 2.54	3,140 2,870	1949	May 16, 1949 May 29, 1949 June 18, 1949	3.37 3.37 4.19	2,360 2,360 4,490
1933	June 13, 1933		3,590	1950	June 2, 1950	3.48	2,660
1934	May 12, 1934	2.41	1,200		June 7, 1950 June 14, 1950	3.70 3.82	3,150 3,460
1935	June 16, 1935	3.68	3,450	1951	May 29, 1951 June 22, 1951	3.70 3.66	3,160 3,060
1936	May 6, 1936 June 1, 1936 June 16, 1936	3.57 3.47 3.24	3,030 2,790 2,270	1952	May 9, 1952 May 15, 1952 June 11, 1952	3.39 3.49 4.70	2,650 2,830 5,200
1937	May 19, 1937 May 30, 1937	3.33 3.30	2,300 2,230	1953	May 29, 1953 June 15, 1953	3.80 4.38	3,400 4,360
1938	May 1, 1938 May 17, 1938 May 30, 1938	3.52 3.67 3.79	2,710 3,000 3,290	1954	May 22, 1954	3.09	2,110
1939	June 22, 1938 May 6, 1939	3.69	3,100	1955	May 16, 1955 June 9, 1955	3.20 3.29	2,360 2,470
1940	May 13, 1940 June 3, 1940	3.18 3.52 3.38	2,060 2,740 2,520	1956	May 24, 1956 June 3, 1956	3.54 3.65	2,870 3,120
1941	May 14, 1941 May 27, 1941 June 21, 1941	4.07 3.64 3.31	4,100 3,030 2,300	1957	June 8, 1957 June 30, 1957 July 8, 1957 July 18, 1957	4.18 4.45 4.20 3.13	4,870 5,220 4,560 2,410
1942	May 27, 1942	4.15	4,240	1958	May 8, 1958	2.89	2,180
1943	June 2, 1943 June 23, 1943	3.20 3.14	2,260 2,100		May 13, 1958 May 30, 1958 June 8, 1958	3.16 4.08 4.01	2,590 4,340 4,320
1944	May 17, 1944 May 24, 1944 June 12, 1944	3.43 3.51 3.32	2,660 2,770	1959 1960	June 9, 1959	3.32	2,860
1945	May 12, 1945	3.51	2,360 2,890	1961	June 5, 1960 June 1, 1961	3.27 2.87	2,650 2,100
1340	May 27, 1945 June 15, 1945 June 26, 1945	3.21 3.19 3.58	2,220 2,180 3,070	1962	Apr. 25, 1962 May 13, 1962	2.92 3.90	2,310 4,150
1946	June 11, 1946	3.30	2,400	L	June 15, 1962	3.28	2,920

3055. Piceance Creek at Rio Blanco, Colo.

Location.--Lat 39°43'50", long 107°56'40", in sec.4, T.4 S., R.94 W., on right bank 20 ft downstream from road bridge, a quarter of a mile upstream from State Highway 13, and 1 mile southeast of Rio Blanco.

Drainage area. -- 9 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,200 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 11 cfs.

Remarks.--Small diversions above station for irrigation of hay meadows above and below station do not materially affect peak flows. Peaks are primarily from snowmelt. Base for partial-duration series, 15 cfs.

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)				
1953	May 16, 1953	3.96	18	1956	Apr. 28, 1956	3.85	11				
1954	Dec. 22, 1953 Apr. 9, 1954	a4.15 3.62	- 7.5	1957	May 2, 1957 May 9, 1957 May 19, 1957	a4.36 4.08 3.86	- 23 21				
1955	Mar. 18-23, 1955 Apr. 18, 1955	a4.10 3.68	6.4								

a Backwater from ice.

3065. White River near Watson, Utah (Published as "near Dragon" 1906 and as "near Rangely, Colo." 1904-5, 1918)

Location.--Lat 39°59', long 109°11', in sec.2, T.10 S., R.24 E., Salt Lake meridian, on right bank 350 ft downstream from bridge on State Highway 45, 1 mile downstream from Evacuation Creek, and 7 miles north cf Watson.

Drainage area. -- 4,020 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 1, 1923; recording thereafter. At site 25 miles upstream (half a mile northwest of Rangely, Colo.) at different datum prior to Nov. 24, 1918. At site 350 ft upstream at datum 4.48 ft higher Apr. 1, 1923, to Oct. 3, 1938. At site 1,450 ft upstream at different datum Oct. 4, 1938, to Apr. 17, 1939. At site 100 ft upstream at datum 3.00 ft higher Apr. 18, 1939, to Sept. 6, 1956. At site 25C ft upstream at datum 3.00 ft higher Sept. 7, 1956, to Oct. 26, 1959. Datum of gage is 4,946.78 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 5,000 cfs.

Bankfull stage .-- 5 ft.

Remarks.--Diversions for irrigation of about 30,000 acres substantially affect peak flows. Records for 1923-33, furnished by State engineer of Colorado. Base for partial-duration series, 2,900 cfs. Only annual peaks are shown prior to 1956.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904 1905	May 26, 1904 June 12, 1905	-	2,370 4,870	1947 1948	Aug. 12, 1947 Mar. 26, 1948	5.67 a6.79	6,200
1923 1924 1925	May 28, 1923 Aug. 14, 1924 July 21, 1925	4.13 6.6 4.51	3,220 7,800 4,040	1949 1950	May 23, 1948 June 17, 1949 Oct. 9, 1949 Feb. 27, 1950	4.39 - a4.02	3,180 4,150 3,740
1926 1927 1928 1929	Aug. 10, 1926 Sept.13, 1927 May 11, 1928 Mar. 23, 1929	4.56 4.49 5.93 alo.80	3,640 3,840 6,280	1951 1952 1953	Aug. 29, 1951 Mar. 31, 1952 June 12, 1952 Aug. 1, 1953	5.45 a6.46 - 4.68	5,820 - 5,200 4,600
1930	July 15, 1929 Oct. 9, 1929	5.10	ъ8,160 5,700	1955	Mar. 12, 1955	9.0	7,650
1931 1932 1933	June 9, 1931 May 18, 1932 Aug. 28, 1933	3.63 4.55 4.31	1,860 3,170 4,620	1956	Mar. 5, 1956 May 22, 1956	4.28 3.37	4,040 2,920
1934 1935	Sept. 8, 1934 Sept. 8, 1935	4.80 4.08	5,000 3,370	1957	June 8, 1957 June 17, 1957 July 2, 1957	4.40 4.46 4.70	4,520 4,700 5,150
1936 1937	Aug. 11, 1936 July 9, 1937	4.50 5.86	3,980 6,380		Aug. 6, 1957	5.00	5,350
1938 1939 1940	Sept. 2, 1938 Mar. 19, 1939 Dec. 24, 1939	5.69 5.67 a4.68	5,480 4,490	1958	May 31, 1958 June 9, 1958	3.57 3.37	4,000 3,900
1010	May 14, 1940	44.00	2,270	1959	June 10, 1959	2.73	2,670
1941 1942	May 15, 1941 Mar. 14, 1942 May 29, 1942	4.63 a9.7	4,210 - 4,620	1960	Mar. 9, 1960 June 8, 1960	ab7.65 5.50	2,600
1943 1944	Aug. 3, 1943 May 18, 1944	6.5 3.55	8,010 2,880	1961	Sept.22, 1961	6.86	4,180
1945	May 13, 1945	3.40	2,820	1962	Feb. 11, 1962 Mar. 28, 1962	al3.1 9.06	6,760
1946	Aug. 13, 1946	4.01	3,650	L	May 14, 1962	6.62	3,910

a Backwater from ice.

b Maximum daily.

3070. Green River near Ouray, Utah

Location. --Lat 40°04'20", long 109°43'40", in NE $\frac{1}{4}$ sec.11, T.5 S., R.2 E., Uinta meridian, on right bank $2\frac{3}{4}$ miles upstream from Willow Creek and 3 miles southwest of Ouray.

Gage.--Recording. Altitude of gage is 4,640 ft (from river-profile map).

Stage-discharge relation. -- Defined by current-meter measurements.

Remarks. -- Diversions for irrigation of about 518,000 acres affect peak discharges. Base for partial-duration series, 16,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 25, 1948	11.56	26,200	1954	May 26, 1954	10.42	19,700
1949	May 7, 1949 May 21, 1949	10.27 11.47	19,600 27,200	1955	May 27, 1955	9.55	14,700
	June 21, 1949	12.62	33,700	1957	May 12, 1957 June 14, 1957	10.76 14.42	24,100 43,300
1950	Apr. 26, 1950 June 7, 1950	9.97 12.17	19,300 31,900	1958	May 30, 1958	13.53	37,600
1951	May 31, 1951 June 22, 1951	12.27 12.00	30,600 28,200	1959	June 23, 1959	11.15	18,500
1952	Apr. 9, 1952 May 9, 1952	9.40 14.18	19,400 41,200	1960	May 17, 1960 June 10, 1960	10.23 10.59	16,000 16,900
	June 11, 1952	14.99	43,600	1961	June 2, 1961	9.98	15,000
1953	June 18, 1953	12.36	28,400	1962	May 13, 1962	-	a32,500

a Maximum daily.

3075. Willow Creek above diversions, near Ouray, Utah

 $\underline{Location}$.--Lat 39°34', long 109°35', in $N\!W_4^1$ sec.32, T.14 S., R.21 E., on right bank half a mile upstream from Reid Ranch and 48 miles south of Ouray.

Drainage area. -- 310 sq mi, approximately.

 $\frac{\text{Gage.--Recording.}}{1952, \text{ and at present site at datum 1.72 ft higher Nov. 7, 1952, to Aug. 1, 1962.}}$

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs and extended above on basis of slope-area measurement at 399 cfs.

Remarks.--Peak flows not materially affected by one small diversion above station. Base for partial-duration series, 50 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	July 16, 1951	6.19	a131	1955	Apr. 26, 1955	4,85	55
1952	July 30, 1952	8.19	a386		Aug. 4, 1955	5.11	68
1953	July 17, 1953 July 28, 1953 July 31, 1953	5.23 5.14 8.02	60 53 399		Aug. 7, 1955 Aug. 13, 1955 Aug. 17, 1955	5.08 6.02 5.20	66 156 77
	041, 01, 1000	0.02	333	1958	Oct. 3, 1957	5.68	83
1954	Mar. 10, 1954 Apr. 14, 1954 July 16, 1954 July 19, 1954 July 24, 1954 July 26, 1954 Aug. 11, 1954 Aug. 12, 1954 Sept. 24, 1954 Sept. 25, 1954	5.82 5.39 7.07 5.04 5.14 5.10 5.66 5.14 5.39	125 102 282 53 61 62 59 110 67 89	1959	Feb. 23, 1958 Mar. 22, 1958 May 12, 1958 Aug. 17, 1958 Aug. 19, 1958 Aug. 22, 1958 Sept. 13, 1958 Aug. 1, 1958	5.85 7.90 5.58 5.20 4.93 6.15 5.45 5.24	134 398 111 77 51 159 87 73
	- ,		· ·	1505	Aug. 20, 1959	5.66	92
1955	Mar. 11, 1955	6.32	181		l		
	Mar. 22, 1955 Apr. 10, 1955 Apr. 17, 1955 nual peak only.	4.76 4.80 4.84	50 55 57	1960	Mar. 20, 1960 Apr. 10, 1960	5.41 5.14	100 68

Peak stages and discharges of Willow Creek above diversion, near Ouray, Utah--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1961	Mar. 24, 1961 Apr. 5, 1961 Apr. 18, 1961 Aug. 29, 1961 Sept. 8, 1961	5.03 6.25 - 6.15 5.23	63 162 130 146 57	1962	Mar. 27, 1962 Apr. 2, 1962 Apr. 8, 1962 Apr. 20, 1962 Sept.22, 1962	8.58 - 6.88 - 5.83	435 340 232 (b) 74

b Unknown; probably exceeded base discharge.

3080. Willow Creek near Ouray, Utah

 $\underline{\text{Location}}$.--Lat 39°56'30", long 109°39'00", in sec.22, T.10 S., R.20 E., on left bank 8 miles upstream from mouth and 10 miles south of Ouray.

Drainage area. -- 890 sq mi, approximately.

 $\underline{\text{Gage.--Recording July 1947}}$ to September 1955; crest-stage gage since 1960. Altitude of gage is 4,830 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 240 cfs and extended above on basis of slope-area measurement at gage height 4.27 ft and logarithmic plotting.

 $\frac{\text{Remarks.--Diversion for irrigation above station does not materially affect}}{\text{peak flows.}} \quad \text{Only annual peaks are shown.}$

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947 1948 1949	Aug. 6, 1947 July 25, 1948 July 5, 1949	5.56 4.02 5.18	905 424 740	1954 1955	Sept.26, 1954 Aug. 7, 1955	3.60 7.16	446 1,420
1950	Sept. 7, 1950	2.66	214	1960	July 30, 1960	_	690
1951 1952 1953	Mar. 26, 1951 Aug. 27, 1952 July 31, 1953	1.66 9.68 2.85	64 2,320 206	1961 1962	Sept.17, 1961 February 1962	7.87 17.73	1,510 all,000

a Estimated.

3085. Minnie Maud Creek near Myton, Utah

Location.--Lat 39°48′, long 110°34′, in \dot{SW}_{u}^{1} sec.3, T.12 S., R.12 E., on left bank 40 miles southwest of Myton.

Drainage area. -- 30 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,190 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 110 cfs and extended above on basis of slope-area measurement at 1,370 cfs.

Remarks. -- No diversion above station. Base for partial-duration series, 20 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 5, 1952	6.07	314	1960 .	Apr. 6, 1960 Aug. 22, 1960	6.48 6.83	78 103
1953	July 31, 1953	4.82	53		Sept.18, 1960	-	(b)
1954	June 27, 1954	5.60	10	1961	Aug. 1, 1961 Aug. 4, 1961	7.33 6.82	227 127
1955	Mar. 24, 1955 Apr. 25, 1955	a8.70 5.41	- 22		Aug. 4, 1961 Aug. 6, 1961 Aug. 25, 1961	7.61 9.40	304 1.370
1958	May 11, 1958	6.92	146		Sept.18, 1961	6.23	209
1959	Dec. 19, 1958 Aug. 20, 1959	a7.70 5.93	- 7.2	1962	Apr. 19, 1962 May 10, 1962 Sept.21, 1962	5.70 - 7.78	160 (b) 798

a Backwater from ice.

b Discharge exceeded base.

3090. Minnie Maud Creek at Nutter Ranch, near Myton, Utah

<u>Location</u>.~-Lat 39°48'45", long 110°15'00", in $SE_{\overline{u}}^{\frac{1}{4}}$ sec.32, T.11 S., R.15 E., on left bank three-quarters of a mile upstream from Gate Canyon, 18 miles north of Sunnyside, 22 miles upstream from mouth, and 29 miles south of Myton.

Drainage area. -- 231 sq mi.

Gage.--Recording July 1947 to September 1955; crest-stage gage since 1960. Altitude of gage is 5,760 ft (by barometer).

Stage-discharge relation. --Defined by current-meter measurements below 370 cfs and extended above on basis of slope-area measurement at gage height 5.5 ft, point of overbank flow at 6.8 ft, and logarithmic plotting.

Remarks. -- Some diversion above station for irrigation does not materially affect peak flows. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947 1948 1949	Aug. 22, 1947 Aug. 24, 1948 June 19, 1949	5.96 2.88 5.50	704 158 670	1954 1955	Sept.26, 1954 Aug. 25, 1955	3.58 8.8	321 1,370
1950	July 28, 1950	4.56	467	1960	Sept. 7, 1960	-	370
1951 1952 1953	May 21, 1951 May 6, 1952 July 31, 1953	2.93 4.85 4.49	143 596 483	1961 1962	Sept.18, 1961 Sept.22, 1962	7.30 5.62	1,000 680

3100. Gooseberry Creek near Scofield, Utah

Location.--Lat 39°43', long ll1°18', in $SW^{\frac{1}{4}}$ sec.6, T.13 S., R.6 E., on right bank 300 ft downstream from old Mammoth Dam, $5\frac{1}{2}$ miles upstream from mouth, and 7 miles west of Scofield.

Drainage area. -- 16.4 sq mi.

Gage.--Recording. At different datum October 1930 to September 1931 and at datum 0.50 ft higher May 1940 to September 1954. Altitude of gage is 8,430 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 270 cfs.

Remarks.--Transmountain diversion above station to Sevier River basin for irrigation, part of which is water diverted into Gooseberry Creek from Boulger Creek. A small reservoir (capacity, about 1,900 acre-ft) on Gooseberry Creek 5 miles above station is used to regulate these diversions. Flow also affected by small reservoir 1 mile above station. Peak discharges may be affected. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931 1932	May 3, 1931 (a)	1.09 2.04	98 325	1951 1952	May 20, 1951 May 30, 1952	1.68 2.36	189 414
1941 1942	May 18, 1941 May 25, 1942	2.25 2.05	366 304	1953 1954 1955	May 27, 1953 May 7, 1954 May 12, 1955	1.59 .87 1.99	218 89 161
1943 1944 1945	June 1, 1943 May 15, 1944	1.57	178 265	1956	May 9, 1956	2.02	165
1945	May 12, 1945 Apr. 29, 1946	1.95 1.55	263 170	1957 1958 1959	June 6, 1957 May 28, 1958 May 14, 1959	2.98 2.85 1.79	369 345 122
1947 1948	May 4, 1947 May 16, 1948	2.06 1.54	292 167	1960	May 13, 1960	2.20	203
1949 1950	May 17, 1949 May 22, 1950	2.31 1.82	360 235	1961 1962	May 12, 1961 May 9, 1962	1.42 2.57	74 279

a Occurred during period Oct. 29, 1931 to June 28, 1932.

3105. Price River above Scofield Reservoir, near Scofield, Utah

Location. --Lat 39°46'30", long lll°10'45", in SE_{u}^{1} sec.18, T.12 S., R.7 E., on left bank at mouth of canyon, 800 ft upstream from bridge, half a mile upstream from Pondtown Creek, and 4 miles north of Scofield.

Drainage area. -- 62 sq mi, approximately.

<u>Gage.</u>--Recording. At site 300 ft downstream at different datum prior to September 1932. At datum 0.34 ft higher October 1938 to Oct. 8, 1958. Altitude of gage is 7,630 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 580 cfs.

Remarks. -- Small transmountain diversions in headwaters for irrigation in Sevier Lake basin, and one diversion above station for irrigation. Peak discharges not materially affected. Base for partial-duration series, 350 cfs. Only annual peaks are shown subsequent to 1952.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height vear (cfs) vear (cfs) (feet) (feet) 1932 May 19, 1932 July 17, 1932 3.77 May 2.55 673 1948 17, 1948 414 3.38 390 3, 1949 17, 1949 2.28 1949 May 385 1933 June 2, 1933 4.10 2.94 594 May 1939 Apr. 30, 1939 2.29 261 1950 May 23, 1950 2.66 463 1940 May 13, 1940 3.00 520 1951 May 20, 1951 2.37 433 13, 1941 18, 1941 26, 1941 6, 1952 804 1941 May 3.11 645 1952 Mav 3.21 14, 1952 20, 1952 30, 1952 3.00 1,070 May 588 May 3.62 May May 2.80 494 3.28 798 3.67 905 May 1942 May 26, 1942 3.10 629 28, 1953 8, 1954 12, 1955 1953 2,52 492 May June 1, 1943 1.53 213 1943 2.43 342 1954 May May 448 1955 2.48 15, 1944 24, 1944 577 1944 May 3.00 May 2.97 563 1956 May 6, 1956 2.45 **44**S June 2. 1944 2.88 522 1957 June 4, 1957 23, 1958 3.65 81s 3.63 1.98 868 1958 May 14, 1959 3.08 629 1959 221 1945 May 11, 1945 May 17, 1945 Mav 2.86 2.86 522 1960 May 13, 1960 479 12, 1961 7, 1962 11, 1962 1961 May 1.43 122 1946 Apr. 26, 1946 2,48 412 1962 May a660 May 4, 1947 3.08 622 May 3.44 613

a Maximum daily discharge; estimated.

3120. North Fork White River near Soldier Summit, Utah

Location.--Lat 39°56', long 111°04', in NE_{u}^{1} sec.30, T.10 S., R.8 E., on right bank 500 ft upstream from mouth and 1 mile southeast of Soldier Summit.

Drainage area. -- About 23 sq mi.

<u>Gage.</u>--Nonrecording prior to Apr. 5, 1943; recording thereafter. Altitude of gage is 7,360 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements.

 $\frac{\text{Remarks.}\text{--One small diversion above station for irrigation does not materially}}{\text{affect peak flows.}} \quad \text{Only annual peaks are shown.}$

					-		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942 1943 1944 1945	Apr. 15, 1942 Apr. 21, 1943 May 9, 1944 May 8, 1945	3.33 2.18 3.50 2.84	99 58 121 86	1946 1947	Apr. 21, 1946 May 4, 1947	2.61	98 86

3125. White River near Soldier Summit, Utah

Location .--Lat 39°55'20", long 111°03'25", in NE_{4}^{1} sec.30, T.10 S., R.8 E., on left bank 600 ft downstream from North Fork and 1 mile southeast of Soldier Summit.

Drainage area. -- 53 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 7,340 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Two small diversions from North Fork for irrigation. Peak discharges not materially affected. Base for partial-duration series, 90 cfs.

Peak	atamea	and	discharges	

	Total pedges and arbonardes								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1940	Apr. 4, 1940	1.65	87	1952	May 5, 1952	4.53	1,120		
1941	May 10, 1941	3.70	288		May 21, 1952 July 29, 1952 July 31, 1952	2.68 1.31 1.19	322 109 92		
1942	Apr. 14, 1942	3.13	216		0415 01, 1502	1.15	32		
	Apr. 22, 1942	2.65	170	1953	Apr. 27 or 28,	1.15	95		
	May 10, 1942	2.30	148	1	1953				
1943	1 04 3047	3 50			May 21, 1953	1.15	92		
1945	Apr. 24, 1943	1.78	113	1954	Tuler 17 1054	1 70	335		
1944	May 9, 1944	2.96	241	1934	July 17, 1954	1.32	115		
	, , , , , , , , , , , , , , , , , , , ,	2.00		1955	May 6, 1955	1.56	168		
1945	May 8, 1945	1.77	152		Aug. 18, 1955	1.61	171		
1946	Apr. 22, 1946	1.77	160	1956	May 7, 1956	1.80	188		
1947	May 5, 1947	1.86	165	1957	May 9, 1957	2.40	270		
1948	May 7, 1948	1.41	96	1958	Apr. 21, 1958	1.31	121		
				1	May 11, 1958	2.73	318		
1949	Apr. 29, 1949	2.57	272						
	May 20, 1949	1.78	165	1959	Apr. 6, 1959	.40	34		
1950	Apr. 22, 1950	2.00	221	1960	May 10, 1960	1.14	77		
	May 17, 1950	1.62	159	1961	May 3, 1961	.39	20		
1951	May 12, 1951	1.55	130	1962	Apr. 24, 1962	2.72	304		
	May 21, 1951	1.48	118	Į	May 7, 1962	2.62	300		

3130. Price River near Heiner, Utah

<u>Location</u>.--Lat 39°43'05", long 110°51'55", in $SW^{\frac{1}{4}}$ sec.1, T.13 S., R.9 E., on left bank two-thirds of a mile north of Heiner and three-quarters of a mile downstream from Willow Creek.

Drainage area. -- 455 sq mi.

Gage.--Recording. At datum 1.0 ft higher prior to Apr. 26, 1957, and at datum 0.1 ft lower Apr. 26, 1957, to Oct. 25, 1960. Altitude of gage is 6,000 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 900 cfs and by slope-area measurements at gage heights 6.16 and 7.98 ft.

Remarks. -- Several small diversions from tributaries above station for irmigation and municipal supply. Flow regulated by Scofield Reservoir. Rain runoff peaks not materially affected; snow runoff is affected. Base for partial-duration series, 640 cfs. Only annual peaks are shown subsequent to 1953.

Peak stages and discharges of Price River near Heiner, Utah

		J- # a-			,		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	July 18, 1935 Aug. 26, 1935	3.08 6.16	654 4,850	1944	July 24, 1944	3.32	792
1936	Apr. 28, 1936 July 11, 1936	2.86 3.44	746 1,070	1945	Aug. 12, 1945 Aug. 14, 1945	3.40 5.00	840 2,660
	July 18, 1936 Aug. 5, 1936 Aug. 31, 1936 Sept. 2, 1936	3.45 2.92 2.77 5.7	1,100 776 680 4,000	1946	July 24, 1946 Aug. 13, 1946 Aug. 23, 1946	3.90 5.24 4.50	1,230 2,950 1,890
1937	Sept. 3, 1936 Apr. 15, 1937	3.30 2.98	980	1947	Oct. 1, 1946 Aug. 5, 1947 Aug. 21, 1947	4.68 3.07 3.90	2,180 692 1,190
	May 30, 1937 July 29, 1937 Aug. 29, 1937	3.24 4.12 3.09	920 1,360 764	1948	Aug. 23, 1948	3.25	736
	Aug. 31, 1937	4.00	1,360	1949	July 3, 1949	4.26	1,610
1938	May 18, 1938 Aug. 8, 1938	2.96 3,58	776 1,090	1950	July 28, 1950	2.62	417
	Aug. 13, 1938 (a)	3.35 2.84	1,010	1951	Aug. 4, 1951	2.85	528
1939	Mar. 19, 1939 Sept.12, 1939	2.80 3.40	685 1,040	1952	Apr. 28, 1952 May 1, 1952 May 17, 1952 June 3, 1952	4.87 4.93 3.94 3.80	2,620 2,440 1,730 1,630
1940	Sept.13, 1940 Sept.17, 1940 Sept.19, 1940	7.98 3.82	9,340 1,430	1953	Aug. 21, 1952	3.60	1,490
	Sept.19, 1940 Sept.27, 1940 Sept.28, 1940 Sept.29, 1940	3.02 3.37 3.75 4.35	814 1,060 1,360 1,960	1955	July 17, 1953 July 31, 1953 Aug. 14, 1953 Aug. 28, 1953	3.85 2.95 2.34 4.77	1,660 1,050 693 2,460
1941	May 15, 1941 May 26, 1941 June 7, 1941	3.50 3.55 3.55	1,110 1,090 1,010	1954 1955	Sept.26, 1954 Oct. 7, 1954	3.00 3.37	1,070 1,340
	Aug. 29, 1941 Sept.13, 1941	4.45 4.75	1,840 2,280	1956 1957 1958	July 2, 1956 Aug. 7, 1957 May 11, 1958	2.29 5.75 3.90	622 2,320 1,010
1942	Apr. 2, 1942 May 28, 1942	3.40 3.42	975 8 4 2	1959 1960	Aug. 25, 1959 July 7, 1960	3.51 2.61	751 315
1943	Aug. 18, 1943 Sept.27, 1943	4.00 3.37	1,200 808	1961 1962	Aug. 25, 1961 Sept.21, 1962	4.27 4.40	1,160 1,220
1944	May 18, 1944	3.44	868	L			

a Occurred during period Aug. 31 to Sept. 8, 1938.

3135. Price River near Helper, Utah

<u>Location</u>.--Lat 39°39'05", long 110°51'25", in SE^{1}_{μ} sec.36, T.13 S., R.9 E., at highway bridge three-quarters of a mile above diversion dam of Price River Irrigation Co. and 2 miles south of Helper.

Drainage area. -- 530 sq mi, approximately.

Gage. -- Nonrecording. At ford near Spring Glen a quarter of a mile upstream at different datums prior to May 29, 1922. Altitude of gage is 5,700 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 2,300 cfs and extended above.

Remarks.--Small diversions above station for irrigation. Flow regulated by Scofield Reservoir and, prior to June 24, 1917, by Mammoth Reservoir on Gooseberry Creek. Rain runoff peaks not materially affected; snow runoff is affected. Only annual maximum observed figures are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904 1905	Aug. 27, 1904 Sept.29, 1905	9.50 6.8	1,770 1,740	1910	Sept.17, 1910	4.8	1,580
1906	May 21, 1906	6.3	1,530	1911 1912 1913	Sept.27, 1911 June 4, 1912 July 19, 1913	6.00 4.5 8.0	3,500 990 6,000
1908 1909	Mar. 15, 1908 June 6, 1909	4.8 5.9	910 1,660	1914 1915	May 18, 1914 Sept. 3, 1915	5.3 4.40	1,790 780

Peak stages and discharges of Price River near Helper. Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916 1917 1918 1919 1920	July 28, 1916 June 25, 1917 Sept.22, 1918 Sept. 8, 1919 Aug. 19, 1920	7.0 8.43 4.60 10.0 8.0	3,800 7,300 1,700 12,000 6,900	1926 1927 1928 1929 1930	Oct. 5, 1925 Sept.13, 1927 May 25, 1928 Aug. 3, 1929 Aug. 3, 1930	9.4 12.30 10.36 12.0 12.0	1,400 - 1,440 1,500 1,500
1921 1922 1923 1924 1925	May 30, 1921 July 28, 1922 May 21, 1923 Aug. 13, 1924 Aug. 27, 1925	5.12 5.10 9.66 10.40 12.02	1,950 3,940 1,660 2,680 4,400	1931 1932 1933 1934	Aug. 6, 1931 Aug. 28, 1932 May 29, 1933 Aug. 12, 1934	9.7 11.81 9.60 9.89	525 1,570 324 318

3145. Price River at Woodside, Utah

<u>Location</u>.--Lat 39°15'50", long 110°20'45", in $SE^{\frac{1}{4}}_{4}$ sec.9, T.18 S., R.14 E., on left bank at downstream side of bridge on U.S. Highway 50 at Woodside, 20 miles upstream from mouth.

Drainage area. -- 1,500 sq mi, approximately.

Gage. -- Nonrecording September 1909 to August 1911 at site 100 ft upstream at different datum; recording since November 1945. At datum 1.85 ft higher Nov. 27, 1945, to Oct. 16, 1954. Altitude of gage 1s 4,600 ft (by barometer).

Stage-discharge relation.--Fairly well defined below 1,000 cfs and by one current-meter measurement at 6,230 cfs at present site, and by three float measurements for the relation at site used 1909-11.

Remarks.--Many diversions above station for irrigation. Flow regulated by Scofield Reservoir. Rain runoff peaks not materially affected; snow runoff is affected. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Sept. 1, 1909	18.2	a8,150	1955	Oct. 7, 1954	5,28	2,360
1910	Mar. 6, 1910	12.4	a2,870	1	Oct. 8, 1954 Oct. 9, 1954	7.55 5.77	5,020 2,800
1946	Aug. 24, 1946	2.77	967	[Aug. 6, 1955	3,26	1,070
1947	Oct. 2, 1946 Aug. 22, 1947	3.67 6.55	1,800 6,820	1956	July 30, 1956	2,65	487
1948	Aug. 5, 1948	3.04	1,150	1957	May 24, 1957	3.54	1,220
1949	June 4, 1949 June 12, 1949 June 19, 1949 July 4, 1949 July 6, 1949 Sept.29, 1949	2.72 2.81 4.30 4.33 3.45 3.55	1,030 1,170 3,000 3,570 2,250 2,660		June 11, 1957 July 7, 1957 July 18, 1957 Aug. 7, 1957 Aug. 21, 1957 Aug. 27, 1957 Aug. 30, 1957	4.15 4.25 5.70 8.38 4.93 3.73 6.60	1,810 1,810 3,310 6,430 2,130 1,120 3,960
1950	July 7, 1950 July 8, 1950 July 19, 1950	3.53 3.93 3.36	2,640 3,260 2,300	1958	Oct. 21, 1957 Nov. 3, 1957 May 12, 1958 May 23, 1958	5.63 8.70 4.10 3.78	2,900 6,810 1,420 1,090
1951	Aug. 4, 1951 Aug. 4, 1951 Aug. 23, 1951	6.76 7.34 3.77	7,140 7,720 3,130	1959	Sept.13, 1958 Aug. 20, 1959	4.27	1,520 2,170
1952	Oct. 27, 1951 May 6, 1952 May 16, 1952 June 4, 1952	1.95 3.48 3.64 3.22	1,050 2,830 3,130 2,620	1960	Aug. 26, 1959 Sept.16, 1959 Sept.17, 1959 Sept. 2, 1960	4.67 4.55 4.03	1,990 1,860 1,330
	Aug. 22, 1952 Aug. 27, 1952	2.06 3.98	1,130 3,460	1961	Oct. 9, 1960 Aug. 16, 1961	7.69 4.23	5,440 1,230
1953	July 18, 1953 Aug. 1, 1953 Aug. 28, 1953	2.56 3.20 5.11	1,400 1,970 4,650		Aug. 26, 1961 Aug. 30, 1961 Sept.10, 1961 Sept.18, 1961	4.45 5.50 9.74 7.42	1,430 2,530 8,500 5.060
1954	July 18, 1954 Sept. 4, 1954 Sept.12, 1954 Sept.24, 1954	2.10 5.58 3.42 2.57	1,340 5,420 2,360 1,490	1962	July 26, 1962 Sept.22, 1962 Sept.28, 1962	7.32 8.84 8.05	3,550 5,600 4,530

a Annual peak only.

3150. Green River at Green River, Utah (Published as "at Blake" 1895-99, as "near Elgin" 1911, and as "at Little Valley, near Green River" 1910-23)

<u>Location</u>.--Lat 38°59'10", long 110°09'00", in $NN_u^1SN_u^1$ sec.15, T.21 S., R.16 E., on right bank 100 ft upstream from old highway bridge, 1 mile southeast of town of Green River, 22 miles upstream from San Rafael River, and 117 miles upstream from mouth.

Drainage area. -- 40,600 sq mi, approximately.

a Daily mean discharge.

Gage. -- Nonrecording prior to Nov. 6, 1914, and recording Nov. 6, 1914, to June 20, 1924, at several sites within 7 miles of present gage at various datums. Recording thereafter, except nonrecording June 21 to Sept. 18, 1924, at present site. Datum of recording gage is 4,040.18 ft above mean sea level. datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and by float measurements at gage heights 12.6 and 13.3 ft.

Remarks.--Diversions for irrigation of about 535,000 acres (1914-15 average)
above station (from report of Engineering Advisory Committee to Upper Colorado River Basin Compact Commission). Peak discharges are affected. Base for partial-duration series, 17,000 cfs. Only annual peaks are shown prior to 1916.

Peak stages and discharges Gage Gage Discharge Discharge Water Water Date height Date height year (cfs) vear (cfs) (feet) (feet) 24,400 20, 1895 26,300 26, 1926 10 68 1895 May 7.7 1926 May 3, 1896 9.65 1927 11, 1927 10.17 23,200 1896 40,400 May June May 29, 1897 June 25, 1898 June 27, 1899 11.4 63,000 23,500 May 21, 1927 June 19, 1927 11.55 32,000 32,900 1897 1898 7.9 11.52 June 28, 1927 Sept.14, 1927 10.3 48,200 13.20 46,300 1899 11.75 34,700 10.55 June 10. 1905 33,900 1905 1928 May 15, 1928 May 31, 1928 12,60 40,700 44,700 19,500 June 11, 1907 June 21, 1908 June 13, 1909 May 15, 1910 12.9 May 31, 1928 Sept.27, 1928 1907 48,100 13,1 9.7 15.15 28,300 9.72 1908 1909 62,200 24,600 10.65 1910 10.55 29,200 1929 Mar. 12, 1929 Apr. 8, 1929 Apr. 8, 1929 Apr. 23, 1929 9.40 17,300 21,300 42,300 June 21, 1911 June 12, 1912 June 2,5,1913 June 2, 1914 June 14, 1915 27,600 1911 11.40 54,600 26,700 50,800 May 30, 1929 Aug. 5, 1929 1912 11.9 13.00 1913 7.9 Aug. 9.50 17,400 11.7 1914 Apr. 29, 1930 June 4, 1930 Aug. 17, 1930 1915 6,13 19,300 1930 9.43 17,700 22,800 10.25 Mar. 25, 1916 May 13, 1916 June 15-17, 1916 al7,600 30,800 a26,200 5.8 1916 8.48 7.6 1931 8,65 May 21, 1931 13,100 Apr. 20, 1917 May 24,25, 1917 June 27, 1917 38,200 26,200 1917 7.0 a24,100 1932 May 27, 1932 June 29, 1932 12,40 10.6 a44,500 68,100 10.80 14.53 May 25, 1933 June 16, 1933 17,600 27,700 1933 May 13, 1918 June 24, 1918 1918 18,500 11.23 10.52 44,000 1934 May 17, 1934 7.42 6,460 1919 June 1, 1919 6 27 20,200 June 1, 1935 June 16, 1935 10.05 20,500 1935 1920 11.80 31,400 June 3, 1920 49,400 11.43 May 11, 1921 June 17, 1921 29,400 1921 7.80 1936 Apr. 30, 1936 9.93 19,800 14.12 65,500 May 9, 1936 May 20, 1936 10.52 23,300 11.45 29,100 Mar. 19, 1922 May 11, 1922 June 12, 1922 6.75 23,700 1922 22,500 July 11, 1936 10.58 31,300 46,200 8 29 May 20, 1937 June 1, 1937 July 15, 1937 27,500 1937 11.30 10.80 10.92 25,000 1923 14, 1923 9.10 29,900 10.25 21,500 May 31, 1923 June 16, 1923 11.1 10.47 42,000 38,200 May 22,300 29,700 32,000 10.42 1938 4, 1938 May 22, 1938 June 2, 1938 11.65 1924 7.51 21,800 11.95 May 22, 1924 8.00 24,700 Mar. 21, 1939 May 9, 1939 21,000 1939 10.30 May 26, 1925 Aug. 28, 1925 Sept.19, 1925 1925 10.04 20,600 9,65 17,800 9.20 9.72 17,800 21,400 1940 May 17, 1940 9.37 16,200 6, 1925 9, 1926 9.80 20,100 May 8, 1941 May 27, 1941 9.95 19,400 1926 1941 May 10.43 24,500 11.45 28,100

Peak stages and discharges of Green River at Green River, Utah -- Continued

	T			1	T		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	June 7, 1941	10.55	22,700	1950	July 7, 1950	11.42	25,500
1942	Apr. 18, 1942 Apr. 26, 1942 May 15, 1942	10.05 9.53 9.77	20,400 17,600 18,800	1951	June 2, 1951 June 23, 1951	12.30 11.58	30,600 26,800
	May 31, 1942	12.08	32,600	1952	Apr. 10, 1952 May 11, 1952	10.32 14.87	19,900 45,500
1943	May 8, 1943 June 5, 1943	10.16 11.76	20,800 29,900		June 12, 1952	14.82	44,200
1044	June 29, 1943	9.76	19,300	1953	June 1, 1953 June 18, 1953	9.91 11.97	17,500 28,500
1944	Apr. 7, 1944 June 4, 1944 June 28, 1944	9.63 11.40 10.53	18,200 28,200 23,500	1954	May 27, 1954	10.06	18,600
1945	May 15, 1945	10.52	23,300	1955	May 19, 1955	9.21	14,400
	June 9, 1945 June 29, 1945	10.60	23,800 22,100	1956	May 12, 1956 June 3, 1956	9.93 12.31	17,700 29,800
1946	May 1, 1946 June 13, 1946	9.68 9.58	18,200 18,000	1957	May 14, 1957 June 18, 1957	11.19 14.68	24,600 42,900
1947	May 14, 1947 June 15, 1947	12.68 11.62	33,000 27,100	1958	June 1, 1958	13.80	38,000
	June 25, 1947	12.24	30,500	1959	July 3, 1959	10.08	17,100
1948	Mar. 27, 1948 May 26, 1948	10.45 11.85	20,300 27,800	1960	June 11, 1960	9.82	15,400
1949	May 7, 1949	10.44	20,200	1961	June 4, 1961	9.29	13,400
1343	May 21, 1949 June 19, 1949	11.67 12.73	27,100 33,200	1962	Feb. 13, 1962 Mar. 30, 1962 Apr. 30, 1962	13.06 12.80 12.03	32,500 31,600 28,400
1950	Apr. 27, 1950 June 6, 1950	10.14 12.15	18,600 30,000		May 13, 1962	12.62	31,800

3155. Saleratus Wash at Green River, Utah

Location.--Lat 38°58'50", long l10°14'50", in $SE_{\pi}^{\frac{1}{4}}SE_{\pi}^{\frac{1}{4}}$ sec.15, T.21 S., R.15 E., on right bank 300 ft downstream from bridge on State Highway 24, $4\frac{1}{2}$ miles west of Green River, and 8 miles upstream from mouth.

<u>Drainage area</u>.--180 sq mi, approximately; 200 sq mi, approximately, at site used prior to Sept. 16, 1962.

<u>Gage</u>.--Recording. At site $7\frac{1}{2}$ miles downstream at different datum prior to July 28, 1955, and Feb. 6, 1960, to Sept. 15, 1962. At site $7\frac{1}{6}$ miles downstream at different datum July 28, 1955, to Feb. 5, 1960. Altitude cf gage is 4,170 ft (from topographic map).

Stage-discharge relation. --At site $7\frac{1}{2}$ miles downstream, defined by current-meter measurements below 650 cfs and extended to 4,850 cfs on basis of slope-area measurements at gage heights 6.10 and 8.67 ft. Peak discrarge for 1962 determined by slope-area measurement.

Remarks .-- No diversion above station. Base for partial-duration series, 700 cfs.

Peak stages and discharges

	reak stages and discharges										
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1949	June 6, 1949 June 18, 1949	6.60 4.07	2,550 762	1953	Aug. 1, 1953	5.78	1,340				
	Aug. 9, 1949	5.17	1,310	1954	Sept.13, 1954 Sept.23, 1954	7.72 5.48	2,340 1,380				
1950	July 8, 1950	8.67	4,850		Sept.25, 1954	4.88	992				
1951	Aug. 2, 1951 Aug. 4, 1951	5.74 6.10	1,630 1,670	1955	July 25, 1955	4.03	700				
	Aug. 29, 1951	4.82	987	1956	May 24, 1956	4.88	372				
1952	Oct. 1, 1951 Oct. 26, 1951 Aug. 9, 1952	4.70 4.76 6.13	1,030 1,070 1,810	1957	June 10, 1957 July 18, 1957 Aug. 5, 1957	8.77 6.40 9.25	1,810 835 2,020				

Peak stages and discharges of Saleratus Wash at Green River, Utah--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Aug. 22, 1957 Aug. 26, 1957	8.66 6.20	1,730 757	1960	Oct. 28, 1959 Sept.16, 1960	7.27 4.18	1,170 716
i	Aug. 30, 1957	9.70	2,250	1961	Oct. 9, 1960	5.43	1,410
1958	Oct. 21, 1957 Nov. 2, 1957 Aug. 21, 1958	10.6 8.98	(a) 2,700 1,890		July 31, 1961 Aug. 3, 1961 Sept. 9, 1961 Sept.18, 1961	4.43 5.84 6.10 4.57	785 1,350 921 905
1959	Aug. 19, 1959 Aug. 24, 1959 Sept.17, 1959	8.86 8.10 8.20	1,510 1,250 1,280	1962	Oct. 8, 1961 Sept.21, 1962 Sept.28, 1962	4.24 11.60 8.15	1,290 14,200 5,580

a Unknown; exceeded base discharge.

3160. Browns Wash near Green River, Utah

Location.--Lat 38°59'10", long 110°07'45", in $NW_{\overline{u}}^{1}SW_{\overline{u}}^{1}$ sec.14, T.21 S., R.16 E., on right bank a quarter of a mile upstream from the Denver & Rio Grande Western Railroad Co. bridge, $1_{\overline{u}}^{1}$ miles upstream from mouth, and $1_{\overline{u}}^{2}$ miles east of Green River.

Drainage area. -- 75 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ At site a quarter of a mile downstream at different datums prior to Feb. 4, 1960. Altitude of gage is 4,085 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 600 cfs and extended above on basis of logarithmic plotting and slope-area measurement at 5,620 cfs.

Remarks .-- No diversion above station. Base for partial-duration series, 300 cfs.

	Teak Boages and disonalges								
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1949	Aug. 9, 1949	4.95	2,400	1955	Aug. 7, 1955	3.16	572		
1950	Oct. 19, 1949	3.33	738	1956	Aug. 1, 1956	3.10	531		
1951	Aug. 2, 1951 Aug. 3, 1951 Aug. 3, 1951 Aug. 4, 1951 Aug. 29, 1951	3.17 3.87 3.98 3.08 4.45	701 976 1,020 378 2,120	1957 1958	Aug. 5, 1957 Aug. 13, 1957 Aug. 21, 1957 Nov. 4, 1957	3.96 2.40 -	1,410 747 5,500 352		
1952	Oct. 26, 1951	4.74	2,320	1959	Aug. 19, 1959		5,620		
	July 28, 1952 Aug. 9, 1952 Aug. 26, 1952	4.45 3.16 4.54	2,330 758 2,710	1961	Aug. 3, 1961 Aug. 16, 1961 Aug. 29, 1961	5.26 5.51 4.97	553 681 416		
1953	July 31, 1953	3,23	816		Sept. 8, 1961 Sept. 9, 1961	9.97 11.90	3,300 4,460		
1954	Oct. 19, 1953 Sept.13, 1954	2.90 5.34	331 880	1962	Oct. 8, 1961	7.30	1,700		
1955	Oct. 7, 1954	-	5,100						

3180. Huntington Creek near Huntington, Utah

<u>Location</u>.--Lat 39°22'20", long 111°03'45", in SE_u^1 sec.6, T.17 S., R.8 E., on left bank at upstream side of farm road bridge, 1 mile upstream from Fish Creek and 7 miles northwest of Huntington.

Drainage area. -- 188 sq mi.

Gage. -- Nonrecording prior to Apr. 29, 1913, 9t approximately same site but different datum; recording thereafter. At different datum Apr. 30, 1913, to Sept. 9, 1917. Altitude of gage is 6,200 ft (from topographic map).

Stage-discharge relation.--1909-45: Fairly well defined by current-meter meas-

urements below 1,000 cfs.
1946-62: Defined by current-meter measurements below 1,200 cfs and by slope-area measurements at gage height 6.14 ft.

Remarks.--Small diversions above station for irrigation, including transmountain diversions, to Sevier Lake basin. Flow slightly regulated by small reservoirs above station. Peak discharges may be affected. Base for partial-duration series, 400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Aug. 18, Sept.1, 1909	6.00	al,390	1926	May 20, 1926 Sept.11, 1926	4.16 4.45	622 755
1910	May 5,7,13,1910	5.9	al,070	1927	May 6, 1927 May 17, 1927	4.05 4.76	574 910
1911	May 24,25,26, June 4,5,8,9, 10,11, 1911	4.2	a409		June 7, 1927 June 15, 1927 June 21, 1927 Sept.10, 1927	3.70 3.93 3.79	430 524 466 2,000
1912	July 26, 1912	5.8	al,200	1928		6.9	
1913	May 11, 1913 May 28, 1913 Sept. 8, 1913	5.10 5.02 4.81	799 534 6 3 5	1920	May 9, 1928 May 27, 1928 July 22, 1928 Sept.27, 1928	4.80 4.45 3.70 3.63	980 755 430 403
1914	May 23, 1914 June 1, 1914	6.15 6.00	1,290 1,210	1929	May 24, 1929 June 5, 1929	4.62 4.08	830 575 542
1915	Apr. 29, 1915 May 16, 1915 June 1, 1915 June 10, 1915	4.37 4.50 4.68 4.39	465 520 606 474		June 16, 1929 July 19, 1929 July 25, 1929 July 31, 1929 Aug. 3, 1929 Aug. 5, 1929	4.00 4.02 3.70 4.15 4.13 3.73	551 422 608 598 434
1916	May 8, 1916 May 22, 1916 June 4, 1916	5.60 4.90 5.17	1,100 708 850	1930	May 20, 1930 May 29, 1930 Aug. 2, 1930	3.67 3.83 7.5	411 473 2,500
1917	May 17, 1917	5.58	a888	1931	May 16, 1931	2.65	262
1918	June 19, 1918 June 22, 1918 June 23, 1918 July 10, 1918 July 10, 1918	5.60 5.15 4.95 4.30 5.18	1,160 888 764 408 907	1932	May 21, 1932 July 11, 1932 Aug. 26, 1932	3.75 2.90 3.28	1,060 440 686
1010	Aug. 12, 1918	4.30	408	1933	June 1, 1933 June 9, 1933	3.75 3.75	1,030 1,030
1919	May 2, 1919 May 16, 1919	4.86 4.72	790 702	1934	Aug. 9, 1934	3.08	542
1920	May 24, 1920	5.33	1,340	1935	May 25, 1935 June 7, 1935	3.41 3.57	702 826
1921	May 16, 1921	5.38	1,380		July 16, 1935 July 28, 1935	2.97 3.41	428 702
1922	May 25, 1922	5.29	1,340	1936	May 5, 1936	3.70	900
1923	May 10, 1923 May 20, 1923 May 26, 1923	4.52 4.7 4.65	784 907 880		May 14, 1936 July 28, 1936	3.80 3.00	980 455
1924	July 14, 1923	4.01	556	1937	May 15, 1937 May 30, 1937	4.11 3.27	1,090 554
1924	May 3, 1924 June 21, 1925	3.34 4.24	308 658		June 30, 1937 July 8, 1937 Aug. 28, 1937	3.70 4.52 3.04	900 1,630 485
	July 18, 1925 Aug. 11, 1925 Aug. 25, 1925	3.68 4.10 4.70	432 600 870	1938	Apr. 30, 1938 May 15, 1938	3.50 3.65	760 865
1926 a Ann	May 4, 1926 ual peak only.	4.07	483	1	May 28, 1938 July 19, 1938	3.40 3.18	690 549

Pea	ak stages and dis	charges o	f Huntington	Creek ne	ar Huntington,	UtahCon	tinued
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	July 26, 1938	3,57	844	1950	May 16, 1950	3.09	420
	Aug. 8, 1938	4.15	1,260			l	
	Aug. 9, 1938	3.07	505	1951	May 28, 1951	3.59	646
	Sept. 1, 1938	3.18	549		Aug. 3, 1951 Aug. 23, 1951	3.22	458 800
1939	May 3, 1939	2,94	338	ļ	g. 20, 2002	1	
		ľ		1952	May 7, 1952	4.53	1,110
1940	May 13, 1940	3.80	680	1	May 15, 1952	5.34	1,390
	May 26, 1940	3.69	636	1	May 20, 1952	5.08	1,160
	Aug. 6, 1940	3.98	761	1	June 4, 1952	6.10	1,580
					Sept. 8, 1952	4.58	662
1941	May 12, 1941	4.30	1,050				
	May 26, 1941	3.78	806	1953	May 27, 1953	4.24	516
	June 7, 1941	3.48	652]	June 8, 1953	4.27	528
	June 17, 1941	3.06	477	Į.	July 10, 1953	6.23	1,650
	July 12, 1941	3.35	604		July 31, 1953	5.65	1,250
1942	May 10, 1942	3.14	470	1954	July 13, 1954	3.53	257
	May 27, 1942	4.00	851			1	
	June 6, 1942	3.58	672	1955	May 11, 1955	3.89	338
1943	Apr. 30, 1943	3.35	536	1956	July 30, 1956	8.2	1,940
20-0	June 1, 1943	3.65	694	1500	041, 00, 1000	1	2,020
	,			1957	June 6, 1957	5.47	1,170
1944	May 15, 1944	4.06	1,020		June 26, 1957	4.34	548
	May 24. 1944	3.90	925		Aug. 26, 1957	5.28	1.000
	June 14, 1944	3.37	655		Aug. 27, 1957	5.30	1,020
	June 26, 1944	3.19	568				
				1958	May 23, 1958	5.38	1,180
1 94 5	May 11; 1945	4.24	925	1050	T 7 1050	1.7.00	
2010	A 00 3040	7.00	507	1959	Jan. 7, 1959	b3.60	
1946	Apr. 26, 1946 July 24, 1946	3.29 6.14	583		Aug. 1, 1959	3.41	227
	July 24, 1946	0.14	2,300	1960	May 12, 1960	4.10	442
1947	May 5, 1947	3.71	740	1300	May 12, 1900	4.10	442
1011	May 22, 1947	3.09	406	1961	July 30, 1961	4.00	419
	ray 22, 1941	0.03	400	1301	Aug. 1, 1961	4.47	608
1948	May 18, 1948	3.23	462	1	Aug. 5, 1961	7.10	2,120
1340	May 10, 1540	3.23	102		Aug. 29, 1961	4.27	510
1949	May 18, 1949	3.42	553		Sept. 8, 1961	4.36	548
	June 12, 1949	3.43	562	I	,,	1	1
	July 3, 1949	3.29	498	1962	May 8, 1962	4.98	842
	July 4, 1949	3.08	408		June 14, 1962	4.06	419
	Aug. 9, 1949	3.11	420	1	,	}	
h Bos	lauston from 100						

July Aug. b Backwater from ice.

3185. Huntington Creek near Castle Dale, Utah

Location.--Lat 39°13', long 110°55', in sec.33, T.18 S., R.9 E., half a mile downstream from bridge on road to Green River, 5 miles upstream from mouth of Cottonwood Creek, and 6 miles east of Castle Dale.

Drainage area. -- 325 sq mi.

Gage .-- Nonrecording prior to May 2, 1913; recording thereafter.

Stage-discharge relation. -- Defined by current-meter measurements below 370 cfs and extended above.

Remarks .-- Diversions for irrigation above station affect peak discharges. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Sept.29, 1911	4.2	a301	1916	Aug. 12, 1916	7.20	1,030
1912	May 30, 1912	6.5	a755	1917	Oct. 6, 1916 Oct. 10, 1916	7.05 8.10	995 1,240
1913	Sept. 8, 1913	11.3	al,750		May 18, 1917 June 10, 1917	6.65 7.55	866 1,090
1914	May 24, 1914 June 5, 1914	6.62 6.13	823 709	1918	(c)	5.65	619
1915	(b)	3.94	305		July 14, 1918	7.0	954

a Annual peak only.

b Occurred during period Apr. 20-24, 1915. c Occurred during period June 15-23, 1918.

Peak stages and discharges of Huntington Creek near Castle Dale, Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	May 3, 1919 Aug. 2, 1919	5.60 7.42	563 993	1921	June 10, 1921 July 17, 1921 (d)	7.43 7.15 8.50	1,000 928 1,260
1920	May 23, 1920 June 7, 1920	7.60 6.05	1,040 664		Aug. 14, 1921 Aug. 24, 1921 Sept. 2, 1921	7.60 6.00 > 6.00	-
1921	May 17, 1921	6.00	653		, , , , , , , , , , , , , , , , , , , ,		

d Occurred during period July 29-31, 1921.

3245. Cottonwood Creek near Orangeville, Utah

<u>Location</u>.--Lat 39°16′00″, long ll1°07′45″, in SW_u^1 sec.10, T.18 S., R.7 E., on left bank 2 miles upstream from Grimes Wash and 5 miles northwest of Orangeville.

Drainage area. -- 205 sq mi.

Gage. -- Nonrecording prior to Aug. 11, 1921; recording thereafter. At several sites in vicinity of present gage at different datums prior to June 5, 1957. At datum 0.49 ft higher June 5, 1957, to Oct. 9, 1958. Altitude of gage is 6,050 ft (from topographic map).

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 870 cfs prior to 1952; defined below 1,600 cfs thereafter. Extensive shifts occur in the relation.

Remarks.--Small diversions above station for irrigation. Ephraim and Spring City tunnels, constructed by the Bureau of Reclamation in 1936 and 1938 respectively, and several small canals divert from headwaters of Cottonwood Creek to the Great Basin for irrigation in San Pitch River basin. Peal discharges are affected. Base for partial-duration series, 900 cfs. Only annual peaks are shown prior to 1922.

	reak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1910	Sept.16, 1910	7.9	1,140	1927	Sept.27, 1927	7.85	1,990		
1911 1912 1913	June 8, 1911 July 30, 1912 Sept. 7, 1913	6.5 9.0 9.2	700 1,880 1,980	1932	July 23, 1932 Aug. 21, 1932	6.90 9.80	1,050 2,600		
1914 1915	June 1, 1914 June 1, 1915	8.0	1,440	1933	July 10, 1933	8.65	1,940		
1916	June 9, 1916	7.0	950	1934	Aug. 6, 1934	3.50	450		
1917 1918 1919	June 21, 1917 June 12,14,1918 May 19, 1919	9.0 7.5 5.8	1,880 770 1,750	1935	June 11, 1935 Aug. 15, 1935	4.95 4.33	2,060 1,400		
1920	May 30, 1920 June 9, 1921	5.6	1,520	1936	May 14, 1936 May 27, 1936	4.40 4.40	1,140 1,160		
	.,	6.3	2,200		July 9, 1936 Sept. 1, 1936	4.20 4.80	970 1,580		
1922	June 5, 1922 June 29, 1922 Aug. 21, 1922 Aug. 22, 1922 Aug. 22, 1922	6.55 6.20 7.30 7.32 9.10	1,220 1,040 1,620 1,630 2,500	1937	May 16, 1937 July 8, 1937 Sept. 2, 1937	4.58 5.10 4.65	1,190 2,110 1,920		
	Aug. 31, 1922	5.80	980	1938	June 2, 1938 July 26, 1938	3.90 4.03	1,440 1,640		
1923	May 26, 1923 July 10, 1923 July 15, 1923 July 25, 1923	5.97 6.15 6.25 8.35	1,050 1,120 1,160 2,140	1939	May 31, 1939 July 27, 1939	3.70 4.25	930 1,990		
1924	May 17, 1924	5.08	653	1940	May 13, 1940 Sept.17, 1940	3.88 4.42	1,290 1,100		
1925	July 21, 1925 Sept. 4, 1925	6.8 6.0	1,360 1,020	1941	May 19, 1941 May 25, 1941 Aug. 9, 1941	5.62 4.75 6.38	2,190 1,400		
1926	Aug. 7, 1926 Sept.11, 1926	6.88 6.9	1,200 1,210		Aug. 10, 1941	6.30	2,870 2,800		
1927	May 18, 1927 July 23, 1927 Aug. 27, 1927	6.5 7.05 7.15	1,020 1,080 1,120	1942	May 27, 1942 June 6, 1942 July 15, 1942	4.73 4.48 5.02	1,660 1,150 1,570		
	Sept. 9, 1927	9.2	2,500	1943	Aug. 6, 1943	6.18	2,670		

Peak stages and discharges of Cottonwood Creek near Orangeville, Utah--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 31, 1944	5.10	1,120	1952	July 27, 1952	4.72	2,170
	June 13, 1944	5.15	1,140	li	Sept. 8, 1952	4.40	1,560
	June 26, 1944	5.07	1,070	1953	Aug. 1, 1953	3.42	1,040
1945	July 30, 1945	4.97	986	1954	July 25, 1954	2.82	765
	Aug. 3, 1945	5.30	1,280				
				1955	June 8, 1955	2.28	535
1946	July 24, 1946	4.60	916	1050	T1 70 30EC	2.61	596
1947	May 8, 1947	4.22	824	1956	July 30, 1956	2.01	290
194/	May 0, 1947	4.26	024	1957	Aug. 26, 1957	a5.00	1,280
1948	May 23, 1948	3.97	650	1307	1108. 20, 100,	10.00	2,200
	,			1958	May 25, 1958	4.55	1,100
1949	July 4, 1949	5,14	1,500	<u> </u>	June 5, 1958	4.35	1,260
	July 5, 1949	4.53	906		Aug. 22, 1958	4.57	1,060
	Aug. 9, 1949	4.55	922				
			0.50	1959	June 7, 1959	2.80	300
1950	May 30, 1950	4.55	850	1960	June 3, 1960	3.73	686
1951	May 30, 1951	4.59	997	1360	June 3, 1360	3.73	000
1501	Aug. 3, 1951	5.14	1,020	1961	Aug. 3, 1961	4.40	975
	Aug. 23, 1951	5.77	1,420	1001	Aug. 5, 1961	5,30	1,440
		-• • • • • • • • • • • • • • • • • • •	,	11	Aug. 7, 1961	4.36	970
1952	May 14, 1952	5.23	1,190	ll .			l
	June 11, 1952	4.45	1,990	1962	May 8, 1962	3.42	534

a Annual peak only.

3250. Cottonwood Creek near Castle Dale, Utah

 $\frac{\text{Location.--Lat 39°10', long }110°56', \text{in sec.8, T.19 S., R.9 E., on right bank half a mile upstream from Rock Canyon and 6 miles east of Castle Dale.}$

Drainage area .-- 261 sq mi.

Gage .-- Recording. Altitude of gage is 5,400 ft (from river-profile map).

Remarks.--Many diversions above station for irrigation. Ephraim and Spring City tunnels, constructed by Bureau of Reclamation in 1936 and 1938 respectively, and several small canals divert from headwaters of Cottonwood Creek to the Great Basin for irrigation in San Pitch River basin. Peak discharges are affected. Base for partial-duration series, 410 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Aug. 22, 1947	6.14	al,150	1952	Aug. 27, 1952	6.32	524
1948	May 18, 1948 May 24, 1948	3.65 3.52	468 437	1953	June 14, 1953 Aug. 1, 1953	6.80 5.73	880 476
1949	May 30, 1949 June 14, 1949 June 18, 1949 July 4, 1949 Aug. 9, 1949	3.72 4.34 4.58 4.00 3.90	485 640 704 554 529	1954	Sept. 2, 1954 Sept. 3, 1954 Sept. 4, 1954 Sept.12, 1954	5.98 5.85 5.65 5.91	564 512 433 536
1950	June 1, 1950	3.40	409	1955	Aug. 13, 1955	6.13	636
1951	May 28, 1951 Aug. 3, 1951 Aug. 4, 1951 Aug. 4, 1951 Aug. 23, 1951	4.41 3.69 4.53 5.19 3.70	659 478 690 872 480	1956 1957	May 22, 1956 June 8, 1957 June 28, 1957 June 19, 1957 Aug. 5, 1957	7.70 7.76 7.10 8.08	1,120 1,140 780 1,340
1952	Oct. 26, 1951 May 15, 1952 May 21, 1952 June 3, 1952 July 27, 1952	3.46 5.30 4.56 8.00 6.93	418 898 698 1,660 784	1958	Aug. 7, 1957 Aug. 26, 1957 Aug. 27, 1957 Aug. 29, 1957 June 7, 1958	6.55 7.22 6.60 6.85 7.93	500 818 530 634 b1,390

a Maximum for period July to September. b Annual peak only.

3265. Ferron Creek (upper station) near Ferron, Utah

 $\frac{\text{Location}}{\text{Lake meridian, on right bank 300 ft upstream from Upper South and Upper North Canal diversions and 3 miles west of Ferron.}$

<u>Drainage area</u>.--157 sq mi; 140 sq mi at site used 1911-23. Peak discharges equivalent.

Gage.--Nonrecording May 6, 1911, to Sept. 30, 1923, at site $1\frac{1}{2}$ miles upstream at different datums; recording since December 1947. Altitude of gage is 6,090 ft (from topographic map).

Stage-discharge relation.--1911-23: Defined by current-meter measurements below 290 cfs and extended above.

1947-62: Defined by current-meter measurements below 400 cfs and by

slope-area measurements at gage heights 8.70 and 9.71 ft.

Remarks. -- Small diversions above station for irrigation. Flow slightly regulated by small reservoir above station. Peak discharges not materially affected. Base for partial-duration series, 600 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Pischarge (cfs)
1912 1913 1914	June 3, 1912 Sept. 7, 1913	5.4 7.01	976 1,490	1953	June 12, 1953 July 10, 1953	3.67 5.64	738 1,330
1915	July 28, 1914 June 1, 1915	7.50 4.05	1,710 640		July 29, 1953 July 30, 1953 July 31, 1953	4.87 4.16 8.70	967 732 3,180
1916 1917	June 5, 1916 June 17, 1917	3.0 6.30	561 980		Aug. 28, 1953	3.65	712
1918 1919 1920	June 8, 1918 Aug. 2, 1919 July 25, 1920	4.00 6.80 10.00	510 900 2,100	1954	July 13, 1954 July 18, 1954 Aug. 13, 1954	3.94 3.78 4.85	809 676 1,020
1921 1922	June 9, 1921 Aug. 22, 1922	6.60 6.00	1,300 1,110	1955	Aug. 5, 1955 Aug. 17, 1955	5.70 4.97	1,160 845
1923 1948	Aug. 11, 1923 May 21, 1948	4.00	698	1956	July 29, 1956	5.02	884
	Aug. 4, 1948	5.70	1,300	1957	June 7, 1957	5.14	1,000
1949	June 11, 1949 June 18, 1949 Aug. 8, 1949	4.42 5.67 5.56	764 1,200 1,120		June 12, 1957 June 25, 1957	4.78 4.36	897 791
1950	Sept.28, 1949 July 7, 1950	5.98 4.13	1,240 561	1958	Apr. 18, 1958 May 27, 1958	4.27 4.85	605 1,040
1951	May 27, 1950	4.13 5.10	801		June 6, 1958 Aug. 15, 1958	4.74 4.19	936 775
	Aug. 3, 1951	6.82	1,520	1959	Aug. 4, 1959	2.48	214
1952	May 4, 1952 May 13, 1952	4.97 4.90	766 855	1960	July 30, 1960	4.81	946
	May 20, 1952 June 3, 1952	4.75 6.77	804 1,640	1961	Aug. 3, 1961	5.20	1,020
	Aug. 27, 1952 Aug. 28, 1952	9.71 4.13	4,180 758	1962	May 6, 1962	4.32	629

3275. Ferron Creek near Castle Dale, Utah

<u>Location</u>.--Lat 39°06'20", long 111°01'25", in SE_u^1 sec.4, T.20 S., R.8 E., 6 miles east of Ferron and 7 miles south of Castle Dale.

<u>Drainage area</u>.--210 sq mi; 235 sq mi at site used 1911-14. Peak discharges equivalent.

Gage.--Nonrecording June 1911 to September 1914, at site $1\frac{1}{2}$ miles downstream at different datum; recording since Dec. 17, 1947. Altitude of gage is 5,550 ft (from topographic map).

Stage-discharge relation.--1911-14: Defined by current-meter measurements below 320 cfs and extended above. High-stage relation unstable.

1947-58: Defined by current-meter measurements below 650 cfs and by slope-area measurements at gage heights 3.90 and 6.52 ft. High-stage relation stable.

Remarks.--Many diversions for irrigation above station. Peak discharges are affected. Base for partial-duration series, 350 cfs. Only annual peaks are shown prior to 1948.

Peak stages and discharges of Ferron Creek near Castle Dale, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911 1912 1913 1914	June 18, 1911 June 14, 1912 Sept. 7, 1913 June 2, 1914	9.55 10.10 10.80 10.60	806 746 893 915	1952	May 2, 1952 May 14, 1952 May 21, 1952 June 3, 1952	3.20 3.13 2.85 5.89	560 540 462 1,440
1948	June 2, 1948	2.43	344		Aug. 27, 1952 Aug. 28, 1952	3.79 2.93	755 5 01
1949	May 4, 1949 June 18, 1949 Aug. 8, 1949	2.67 3.90 2.88	428 770 465	1953	July 31, 1953 Sept.12, 1954	4.88 3.38	1,070 614
1950	July 19, 1950	2.30	305	1955	Aug. 5, 1955	2.64	402
1951	May 22, 1951 May 28, 1951 Aug. 3, 1951	3.14 3.21 6.52	538 552 1,630	1956 1957	July 29, 1956 June 8, 1957	2.22 3.76	290 680
1952	Apr. 28, 1952	2.78	442	1958	Oct. 20, 1957	5.98	1,450

3280. San Rafael River near Castle Dale, Utah

<u>Location.</u>--Lat 39°08'40", long 110°54'15", in NW $_{\overline{4}}^1$ sec.27, T.19 S., R.9 E., on left bank 1 mile downstream from Ferron Creek and 8 miles southeast of Castle Dale.

Drainage area. -- 927 sq mi.

Gage.--Recording. At site 600 ft upstream at different datum prior to July 11, 1956. Altitude of gage is 5,320 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 1,000 cfs and by slope-area measurement at gage height 5.18 ft prior to floods of 1952; thereafter defined by current-meter measurements throughout.

Remarks.--Diversions above station for irrigation. Peak discharges are affected. Base for partial-duration series, 700 cfs.

Water year	Date	Cage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 24, 1948 June 2, 1948	3.64	a700 782	1953	Aug. 1, 1953 Aug. 22, 1953	3.64 4.15	1,120 1,430
1949	Mar. 6, 1949 May 15, 1949	b3.77 3.66	- 766	1954	Sept. 12, 1954	2.47	509
:	May 30, 1949 June 4, 1949 June 12, 1949 June 18, 1949	3.76 4.14 4.78 5.18	888 1,120 1,540 1,740	1955	Aug. 5, 1955 Aug. 13, 1955 Aug. 25, 1955	4.22 5.08 3.07	1,560 2,200 842
	July 4, 1949	4.20	1,180	1956	May 26, 1956	3.07	783
	Aug. 8, 1949 Aug. 9, 1949	4.38 5.30	1,280 1,890	1957	June 10, 1957	5,28	c2,990
1950	May 31, 1950 July 8, 1950 July 19, 1950	3.42 4.08 3.45	713 1,100 735	1958	Oct. 21, 1957 Nov. 3, 1957 Apr. 18, 1958 May 12, 1958	5.0 6.08 3.5 3.28	2,620 4,010 1,260 1,170
1951	May 28, 1951 July 20, 1951 Aug. 3, 1951 Aug. 4, 1951	4.17 3.85 5.41 5.53	1,210 978 1,940 2,020		May 28, 1958 June 7, 1958 Sept.12, 1958	4.81 4.88 2.94	2,480 2,690 762
1952	Oct. 26, 1951	4.05		1959	Aug. 20, 1959	1.92	216
1932	Mar. 27, 1952 Apr. 28, 1952	4.85 b5.25 3.99	1,590 - 1,060	1960	June 3, 1960	2.68	575
	May 7, 1952 May 15, 1952 May 21, 1952 June 3, 1952 Aug. 26, 1952 Aug. 27, 1952 Sept. 8, 1952	5.28 5.35 4.94 7.56 3.14 3.45 2.93	2,120 2,240 1,940 4,510 898 1,050 783	1961	Oct. 9, 1960 Aug. 3, 1961 Aug. 17, 1961 Sept. 9, 1961 Sept.18, 1961 Sept.19, 1961 May 9, 1962	3.90 3.80 3.20 6.00 4.55 2.96	1,640 1,550 1,030 3,670 2,220 850
1953	June 14, 1953 July 10, 1953 July 29, 1953	4.13 2.97 3.48	1,440 768 1,080	1302	June 14, 1962 June 20, 1962 Sept.21, 1962	3.06 2.81 3.28	987 806 1,230
n Mo	vimum dailar	3- D1	ton from ico		Annual pools only		<u>_</u>

a Maximum daily.

b Backwater from ice.

c Annual peak only.

3285. San Rafael River near Green River, Utah

Location. --Lat 38°52'20", long 110°22'20", in NW corner of NELSWL sec.27,
T.22 S., R.14 E., on left bank 10 ft upstream from bridge on State Highway 24, 15 miles southwest of Green River, and 35 miles upstream from mouth.

Drainage area. -- 1,690 sq mi, approximately.

Gage.--Nonrecording prior to July 1920 at approximately present site at different datums; recording thereafter. Nov. 29, 1945, to Sept. 9, 1947, at site 400 ft downstream at different datum. Sept. 10, 1947, to Apr. 16, 1950, at site 50 ft downstream at different datum. At datum 7.3 ft higher Apr. 17, 1950, to June 21, 1954; 6.3 ft higher June 22, 1954, to Sept. 30, 1955; 5.3 ft higher Oct. 1, 1955, to Feb. 14, 1958; and 2.3 ft higher Feb. 15, 1958, to Sept. 19, 1962. Altitude of gage is 4,200 ft (by barometer).

Stage-discharge relation.--1909-18: Defined by current-meter measurements below 3,100 cfs.

1945-62: Defined by current-meter measurements below 4,400 cfs and by slope-area measurement at gage height 7.78 ft.

Remarks.--Diversions above and below station for irrigation. Several transmountain diversions from tributaries for irrigation in Sevier River basin. Peak discharges are affected. Base for partial-duration series, 1,800 cfs. Only annual peaks are shown prior to 1946.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909 1910	Sept. 2, 1909 Sept. 17, 1910	12.7	12,000 3,120	1952	May 7, 1952 May 16, 1952 May 22, 1952	6.70 6.98 6.24	2,040 2,420 1,820
1911 1912 1913	Oct. 17, 1910 June 5, 1912 Sept. 9, 1913	7.1 7.8 8.0	2,960 3,660 3,800		June 4, 1952 Aug. 28, 1952	8.SO 7.06	4,480 3,270
1914 1915	June 2, 1914 June 11, 1915	9.0 5.3	3,760 1,300	1953	June 14, 1953	4.57	1,220
1916	Aug. 6, 1916	9.0	3,750	1954	Sept.13, 1954	6.55	2,500
1917 1918	Oct. 8, 1916 July 12,14,1918	12.6 9.00	11,500 3,200	1955	Aug. 14, 1955	2.84	600
1946	Aug. 12, 1946	5.94	2,410	1956	May 26, 1956	4.27	634
1947	June 22, 1947 Aug. 18, 1947	5.52 5.46	2,220 1,870	1957	June 11, 1957 Aug. 30, 1957	8.59 6.56	2,970 1,960
	Aug. 22, 1947	9.26	8,640	1958	Oct. 21, 1957 Nov. 4, 1957	8.26 11.31	3,010 9,660
1948	Aug. 4, 1948	6.15	2,580		May 28, 1958 June 7, 1958	9.16 9.18	2,360 2,330
1949	June 12, 1949 June 19, 1949 July 6, 1949	5.96 6.59 7.11	1,990 2,440 3,200	1959	Sept.17, 1959	5.44	687
	July 7, 1949 Aug. 10, 1949	6.23 6.38	2,290 2,230	1960	Sept. 7, 1960	7.15	1,320
	Sept.10, 1949	5.50	1,880	1961	Oct. 10, 1960 Aug. 4, 1961	9.03 8.94	2,260 2,220
1950	July 8, 1950	6.56	2,230		Sept.10, 1961 Sept.19, 1961	12.88	4,740 2,690
1951	Aug. 4, 1951	7.78	3,740	1962	Sept.22, 1962	8.90	1,350
1952	Mar. 30, 1952	6,50	1,970	1002	, sept , 1002	0.00	1,500

3305, Muddy Creek near Emery, Utah

Location. --Lat 38°59'40", long 111°14'40", in $NE_u^{\frac{1}{4}}$ sec.16, T.21 S., R.6 E., on left bank 100 ft upstream from Emery Canal and 5 miles north of Emery.

Drainage area. -- 105 sq mi.

Gage. --Nonrecording at sites about 1 mile upstream at different datums prior to June 1949; recording thereafter. At site 100 ft upstream prior to May 2, 1957. At datum 2.89 ft higher June 1949 to Mar. 19, 1953, and 1.89 ft higher Mar. 20, 1953, to May 1, 1957. Altitude of gage is 6,400 ft (from topographic map).

Stage-discharge relation.--1909-14: Defined by current-meter measurements below 300 cfs.

1949-62: Defined by current-meter measurements below 400 cfs and by slope-area measurement at gage height 8.25 ft.

 $\frac{\text{Remarks.}\text{--}\text{One small diversion above station for irrigation; peak discharges not}}{\text{materially affected. Base for partial-duration series, 400 cfs. Only annual peaks are shown prior to 1949.}}$

			Peak stages a	nd disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 3, 1909	4.1	356	1954	Sept.12, 1954	5.19	1,320
1911 1912 1913 1914	Aug. 21, 1911 July 28, 1912 July 8, 1913 July 17, 1914	4.2 4.1 5.9 5.5	404 446 969 850	1955	July 19, 1955 Aug. 14, 1955 Aug. 17, 1955 Aug. 25, 1955	5.10 6.08 7.04 4.12	1,230 1,720 2,290 745
1949	Aug. 8, 1949	4.28	816	1956	July 30, 1956	2.66	270
1950	Sept.28, 1949 Aug. 11, 1950	3.64 3.12	531 360	1957	June 6, 1957	4.25	403
1951	Aug. 3, 1951	4.78	1,120	1958	Apr. 18, 1958 May 23, 1958 Aug. 22, 1958	5.22 4.32 5.13	660 406 650
1952	Apr. 27, 1952 May 10, 1952	3.88 8.25	797 3,340		Sept.12, 1958	4.97	631
	May 20, 1952 June 3, 1952 July 27, 1952	2.43 2.98 3,16	557 692 821	1959	Nov. 28, 1958 Apr. 2, 1959	a4.57 2.57	72
1953	July 10, 1953 July 30, 1953	5.56 4.68	1,460 1,040	1960	Dec. 17, 1959 July 29, 1960	a3.90 3.84	282
	Aug. 1, 1953 Aug. 16, 1953 Aug. 28, 1953	3.40 3.09 5.90	544 436 1,560	1961	Aug. 2, 1961 Aug. 3, 1961 Sept. 9, 1961	4.57 4.49 4.43	504 474 403
1954	July 18, 1954 Aug. 11, 1954	7.08 4.42	2,120 932	1962	May 6, 1962	4.28	299
a Bac	kwater from ice.						

3315. Ivie Creek above diversions, near Emery, Utah

Location.--Lat 38°45'30", long lll°25'15", in $NW_u^1NW_u^1$ sec.1, T.24 S., R.4 E., on right bank l_u^1 miles downstream from Clear Creek and 14 miles southwest of Emery

Drainage area. -- 50 sq mi, approximately.

Gage. -- Recording prior to Oct. 1, 1961; crest-stage gage thereafter. At site 50 ft downstream at different datum prior to Oct. 31, 1951. At site 200 ft downstream at different datum Oct. 31, 1951, to Sept. 30, 1961. Altitude of gage is 7,100 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs and extended above by logarithmic plotting.

Remarks.--Flow partly regulated by Sheep Valley Reservoir (capacity, 482 acre-ft).

Small diversion for irrigation of 200 acres above station. Regulation and diversions do not materially affect peak flows. Base for partial-duration series, 80 cfs.

Gage Gage Water Discharge Water Discharge Date height Date height year (cfs) year (cfs) (feet) (feet) June 2, 1957 July 10, 1957 Aug. 5, 1957 1951 July 31, 1951 7.21 418 1957 1.92 184 (a) 139 May 6, 1952 Aug. 26, 1952 Aug. 27, 1952 Aug. 28, 1952 2,15 1952 2.10 90 2.27 112 2.47 155 1958 Sept. 5, 1958 1.93 96 (a) Dec. 18, 1958 Aug. 4, 1959 bl.93 1959 July 27, 1953 July 29, 1953 110 1,24 11 1953 2.39 2.67 172 1960 Sept. 6, 1960 3.50 526 73 1954 Sept.11, 1954 2.28 Aug. 2, 1961 Aug. 15, 1961 2.75 2.50 2.01 1961 275 Aug. 1, 1955 Aug. 13, 1955 Aug. 16, 1955 3.00 2.38 1955 315 215 146 Aug. 20, 1961 11Q 4.00 700 Apr. 19, 1962 62 1962 10.52 1956 Aug. 14, 1956 2.38 146

Peak stages and discharges of Ivie Creek above diversions, near Emery, Utah

3325. Muddy Creek below Ivie Creek, near Emery, Utah

Location.--Lat 38°46', long lll°08', on township line between T.23 and 24 S., and center of R.7 E. (unsurveyed), on right bank $12\frac{1}{2}$ miles southeast of Emery.

Drainage area. -- 440 sq mi, approximately.

 $\frac{\text{Gage.--Recording.}}{1954}$. At site 600 ft downstream at same datum prior to Dec. 2,

Stage-discharge relation.--Defined by current-meter measurements below 480 cfs and extended above on basis of slope-area measurement at 2,890 cfs.

Remarks.--Many diversions above station materially affect peak flows. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Aug. 3, 1951 Sept.29, 1951	9.63 7.72	2,890 1,490	1957	June 10, 1957	5.95	652
1952	Aug. 8, 1952 Aug. 27, 1952	7.87 7.58	1,660 1,450	1958	Sept. 3, 1958 Sept.12, 1958	7.45 6.75	1,440 1,140
1953	July 30, 1953	7.20	1,010	1959	July 31, 1959	4.64	162
1954	July 17, 1954 Sept.12, 1954	7.20 7.07	1,180 1,150	1960 1961	Sept. 6, 1960 Aug. 3, 1961	6.05 6.63	885 1,060
1955	Oct. 7, 1954 July 25, 1955	7.38 8.18	1,280 1,780		Sept. 8, 1961 Sept.18, 1961	6.80 6.58	1,140 1,040
	Aug. 16, 1955 Aug. 25, 1955	7.59 7.23	1,410 1,200	1962	Sept.20, 1962	8.07	al,820

a Annual peak only.

3335. Dirty Devil River near Hite, Utah

<u>Location</u>.--Lat $37^\circ54'40"$, long $110^\circ23'30"$ (unsurveyed), on right bank 2.6 miles upstream from mouth and 7.7 miles northeast of Hite.

Drainage area. -- 4,360 sq mi, approximately.

<u>Gage.</u>--Recording. At datum 0.9 ft lower prior to Nov. 5, 1957. Altitude of gage is 3,470 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and extended above on basis of slope-area measurement at gage height 20.65 ft.

Remarks. -- Many diversions for irrigation above station materially affect peak flows. Base for partial-duration series, 2,700 cfs.

a Unknown; probably exceeded base discharge.

b Backwater from ice.

Peak stages and discharges of Dirty Devil River near Hite, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Aug. 5, 1948 Aug. 6, 1948	16.28 11.10	8,680 5,360	1957	May 8, 1957 July 19, 1957 Aug. 6, 1957	7.35 7.95 10.75	2,930 3,350 5,110
1949	July 5, 1949	7.57	3,120		Aug. 22, 1957 Aug. 31, 1957	20.5	10,780
1950	Oct. 19, 1949 July 9, 1950	6.84 20.25	2,710 11,260	1958	Oct. 12, 1957 Oct. 22, 1957	18.34 18.88	10,200
1951	Aug. 4, 1951	18.75	12,820		Nov. 4, 1957	28.1	10,500 a35,000
1952	Oct. 26, 1951 Aug. 15, 1952	9.75 10.60	4,530 5,100	1959	Aug. 13, 1959	9.57	3,830
	Aug. 27, 1952	8.34	3,410	1960	Nov. 3, 1959	3.90	975
1953	Aug. 2, 1953 Aug. 22, 1953	10.94 12.60	5,160 6,390	1961	Oct. 10, 1960 Aug. 4, 1961 Aug. 5, 1961	11.16 8.65 7.39	6,870 4,500 3,470
1954	Sept.14, 1954	6.72	2,690		Aug. 19, 1961	6.75 10.60	2,980
1955	Oct. 8, 1954 Aug. 14, 1955	7.90 7.35	3,420 2,960		Aug. 26, 1961 Sept. 9, 1961 Sept.18, 1961	20.65	6,310 21,000 4,250
1956	July 1, 1956	12.65	6,360	1962	Sept.21, 1962	6.50	2,810

a Approximate.

NORTH WASH BASIN

3340. North Wash near Hite, Utah

<u>Location</u>.--Lat $37^{\circ}52'05''$, long $110^{\circ}24'40''$, in T.34 S., R.14 E., on right bank 1 mile upstream from mouth and 5 miles north of Hite.

Drainage area. -- 140 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 3,500 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 210 cfs and extended above on basis of slope-area measurements at gage heights 3.19, 3.98, and 9.24 ft.

Remarks.--No diversions above station. Base for partial-duration series, 500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Sept.19, 1950	3,90	al,080	1957	July 11, 1957 Aug. 25, 1957	2.70 2.70	565 545
1951	Aug. 21, 1951	3.19	942				
	1		}	1958	Oct. 21, 1957	3.70	1,150
1952	Oct. 26, 1951	3.29	858	!!	Nov. 2, 1957	4.02	1,790
	Aug. 7, 1952	9.24	8,900	 }	Aug. 23, 1958	2.59	729
	Aug. 21, 1952	3.40	958	ĺ	-		
1953	Aug. 14, 1953	3.06	865	1959	July 29, 1959	2.29	529
	1	0.00		1960	Nov. 2, 1959	2.40	630
1954	July 25, 1954	2.04	273	1300	NOV. 2, 1303	2.40	630
	1			1961	Aug. 18, 1961	5.15	2,000
1955	Oct. 8, 1954	3.40	1,050		Sept. 8, 1961	4.00	1,100
	,		2,000	l	Sept. 9, 1961	5.80	2,630
1956	July 1, 1956	1.80	198	ll .	Sept. 17. 1961	4.75	1,660
	1			ll.		,0	1,000
1957	June 10, 1957	2.75	592	1962	Oct. 31, 1961	1.85	188
o Mo	wimin for the nex	od - 3 M 4	2 4 5	1050			

a Maximum for the period May to September 1950.

3345. White Canyon near Hite, Utah

Location. --Lat 37°47'55", long 110°22'35", on right bank 300 ft downstream from ford on State Highway 95 and 4 miles east of Hite, Garfield County.

Drainage area. -- 276 sq mi.

Gage .-- Recording . Altitude of gage is 3,700 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 550 cfs and extended above on basis of slope-area measurements at gage heights 2.99 and 7.54 ft.

Remarks .-- Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Sept.19, 1950	2.99	a990	1957	June 10, 1957 June 11, 1957	2.35	542 720
1951	Aug. 2, 1951 Aug. 29, 1951	2.66 2.52	1,890 569		July 28, 1957 Aug. 21, 1957 Aug. 30, 1957	3.60 2.60 6.30	1,720 728 5,570
1952	Dec. 30, 1951 Jan. 18, 1952	2.75 2.85	780 860	1958			
3.057	,			1936	Nov. 3, 1957 Sept.12, 1958	2.82 2.77	939 860
1953	July 18, 1953 July 18, 1953 July 31, 1953	4.82 4.26 3.78	3,520 2,780 2,200	1959	Aug. 3, 1959	2.64	800
	July 31, 1953 Aug. 1, 1953 Aug. 22, 1953	7.54 4.20 2.78	7,390 2,750 1,020	1960	Nov. 2, 1959 Aug. 23, 1960	2.32 4.00	595 2,480
	Aug. 27, 1953	5.48	4,590	1961	Aug. 4, 1961 Aug. 5, 1961	4.00 2.42	2,490 707
1954	Oct. 12, 1953 June 27, 1954 Sept.12, 1954 Sept.26, 1954	2.57 2.35 2.50 2.53	787 654 770 804		Aug. 16, 1961 Aug. 29, 1961 Sept. 9, 1961 Sept.18, 1961	5.86 4.29 7.20 2.22	5,030 2,870 6,910 559
1955	Oct. 8, 1954 Oct. 8, 1954 July 26, 1955 Aug. 12, 1955	4.15 6.80 2.90 3.00	2,860 6,350 1,140 1,240	1962	Oct. 9, 1961 Oct. 31, 1961 June 30, 1962 Sept.20, 1962 Sept.28, 1962	4.26 2.30 3.66 5.27 2.80	2,830 616 2,050 4,210 1,040
1956	Aug. 16, 1956	2.41	527		5000.23, 1002	2.00	1,040

a Maximum for the period May to September 1950.

COLORADO RIVER MAIN STEM

3350. Colorado River at Hite, Utah

<u>Location</u>.--Lat 37°48'50", long 110°26'55", in N_2^1 sec.35, T.34 S., R.13 E., on left bank at Hite, a quarter of a mile upstream from Trachyte Creek, 1 mile downstream from White Canyon, 8 miles downstream from Dirty Devil River, and 84 miles upstream from San Juan River.

Drainage area. -- 76,600 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 3,440 ft (from river-profile map).

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Peak discharges are affected. Base for partial-duration series, 40,000 cfs.

Peak stages and discharges of Colorado River at Hite, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 12, 1947 June 13, 1947 June 24, 1947	13.42 12.93 13.34	-	1952	May 8, 1952 June 11, 1952	16.07 17.20	93,000 102,000
1948	Apr. 24, 1948 May 2, 1948	11.72 10.82	50,400 41,100	1953	May 31, 1953 June 16, 1953	11.60 13.45	46,000 62,600
1949	May 24, 1948 May 2, 1949	14.30	79,700	1954 1955	May 25, 1954	9.13	28,200
1949	May 2, 1949 May 21, 1949 June 21, 1949	11.07 11.87 15.67	40,700 48,900 88,200	1955	May 18, 1955 June 5, 1956	9.38	30,600 61,800
1950	May 26, 1950 June 5, 1950 July 9, 1950	11.92 12.39 10.79	47,000 55,200 40,800	1957	May 13, 1957 June 12, 1957	12.44 16.92	53,300 105,600
1951	May 31, 1951 June 24, 1951	12.89 12.68	56,800 56,200	1958	Apr. 23, 1958 June 1, 1958	11.36 15.58	43,700 90,900

ESCALANTE RIVER BASIN

3355. North Creek near Escalante, Utah

Location.--Lat 37°46', long 111°41', in NE $\frac{1}{4}$ sec.16, T.35 S., R.2 E., on right bank 0.1 mile upstream from mouth and 4 miles west of Escalante.

Drainage area. -- 90 sq mi, approximately.

 $\frac{\text{Gage.--Recording.}}{\text{Oct. 17, 1953.}} \quad \text{At site 0.4 mile upstream at different datum prior to} \\ \text{Barbare and better a site of the site of t$

Stage-discharge relation.--Defined by current-meter measurements below 99 cfs and extended above on basis of float measurements at gage heights 1.83 and 4.10 ft, and slope-area measurement at gage height 4.26 ft.

Remarks .-- Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1951 1952 1953	Aug. 2, 1951 Aug. 21, 1952 Aug. 22, 1953	1.11 4.26 1.61	26 3,610 132	1954 1955	July 18, 1954 Oct. 7, 1954	1.77 4.55	100 2,060				

3370. Pine Creek near Escalante, Utah

 $\frac{\text{Location.}\text{--Lat }37^\circ51^\prime45^\circ, \text{ long }111^\circ38^\prime15^\circ, \text{ in }SW_u^{\frac{1}{u}}\text{ sec.}12\text{, }T.34\text{ S., }R.2\text{ E., }Salt}{\text{Lake meridian, on left bank a quarter of a mile upstream from unnamed right bank tributary and 7 miles north of Escalante.}$

Drainage area. -- 78 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,400 ft (from topographic map).

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 35 cfs and extended above on basis of slope-area measurement at 947 cfs.

Remarks .-- One small diversion above station does not materially affect peak flows. Base for partial-duration series, 100 cfs.

Peak stages and discharges of Pine Creek near Escalante, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Aug. 3, 1951 Aug. 3, 1951	4.16 3.41	285 123	1958	June 6, 1958 Sept.12, 1958	3.25 3.85	103 196
1952	May 6, 1952 Aug. 27, 1952	3.87 4.16	208 279	1959	Aug. 19, 1959	2.71	53
	Sept.16, 1952	4.35	325	1960	May 10, 1960	2.96	74
1953	July 30, 1953 Aug. 1, 1953	3.56 3.57	146 153	1961	May 1, 1961 May 12, 1961 July 3, 1961	5.91 4.03 7.52	201 223
1954	Apr. 18, 1954	3.33	108		July 3, 1961 Sept.18, 1961	3.80	9 4 7 1 2 7
1955	Aug. 16, 1955	3.20	102	1962	Apr. 28, 1962 July 23, 1962	3.53 5.67	102 448
1958	May 19, 1958	4.52	288		541y 25, 1502	3.01	440

3375. Escalante River near Escalante, Utah (Published as "Escalante Creek" 1909-13)

Location.--Lat $37^{\circ}46^{\circ}$, long $111^{\circ}34^{\circ}$, in NE_{4}^{1} sec.9, T.35 S., R.3 E., on left bank 150 ft downstream from Pine Creek and 2 miles northeast of Escalante.

Drainage area. -- 310 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 30, 1913, at approximately same site at different datum; recording since 1943. Altitude of gage is 5,700 ft (from topographic map).

Stage-discharge relation.--1909-13: Defined by current-meter measurements below 120 cfs and extended above.

1942-55: Defined by current-meter measurements below 540 cfs and by slope-area measurements at gage heights 4.60, 3.35, 5.50 and 7.34 ft.

Remarks. -- Diversions above station for irrigation of about 2,200 acres of crop and pasture land do not materially affect peak flows. Base for partial-duration series, 350 cfs. Only annual peaks are shown prior to 1943.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	lischarge (cfs)
1910 1911	July 29, 1910 July 22, 1911	5.0 7.55	385 810	1947	Aug. 21, 1947	4.65	561
1912	Oct. 28, 1911	6.2	557	1948	Aug. 4, 1948	3.88	315
1943	July 20, 1943 July 29, 1943 Aug. 17, 1943	4.91 4.08 6.25	796 418 1,750	1949	June 10, 1949 Sept.28, 1949	4.50 7.34	527 2,790
	Sept.25, 1943 Sept.28, 1943	5.80 5.63	1,150 1,040	1950	July 17, 1950	3.18	189
1944	Oct. 18, 1943 June 25, 1944	6.60 5.20	1,970 807	1951	July 31, 1951 Aug. 3, 1951	6.23 6.01	1,560 1,370
	July 2, 1944	5.96	1,370	1952	Aug. 20, 1952 Aug. 21, 1952	4.10 7.59	366 1,980
1945	Aug. 11, 1945 Aug. 12, 1945	5.20 5.18	840 829		Aug. 26, 1952	4.37	452
	Sept. 2, 1945	5.01	770	1953	August 1953	9.9	3,450
1946	Oct. 15, 1945 Aug. 15, 1946	4.08 4.60	414 540	1954	July 12, 1954	4.57	544
1947	Aug. 16, 1947	5.52	1,110	1955	Aug. 13, 1955	9.2	2,980

3380. East Fork Boulder Creek near Boulder, Utah

<u>Location</u>.--Lat 38°02'30", long lll°27'00", in N_2^1 sec.10, T.33 S., R.4 E., on left bank ll miles northwest of Boulder.

Drainage area. -- 21.4 sq mi.

Gage.--Recording. At site three-quarters of a mile downstream at different datum prior to Sept. 24, 1958. Altitude of gage is 9,315 ft (from Garkane Power Association project map).

Stage-discharge relation.--Defined by current-meter measurements below 60 cfs and extended above by logarithmic plotting.

 $\underline{\text{Remarks.--No}}$ diversions above station. Base for partial-duration series, $\underline{150}$ cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1951	May 27, 1951	4.01	264	1958	June 6, 1958	3.66	190				
1952	May 12, 1952 June 4, 1952	3.43 3.30	174 156	1959	May 12, 1959	2,55	78				
	,	1		1960	May 18, 1960	2.41	84				
1953	May 23, 1953	2.88	102	1961	May 23, 1961	3.17	249				
1954	May 6, 1954	2.93	104	1002	May 26, 1961 Sept.18, 1961	2.64 3.18	190 292				
1955	May 24, 1955	3.10	130		' '						
1958	May 20, 1958 May 26, 1958	3.46 3.84	166 220	1962	May 6, 1962 June 2, 1962	2.75 2.06	279 127				

3385. East Fork Deer Creek near Boulder, Utah

<u>Location</u>.--Lat $38\,^{\circ}00\,^{\circ}05$ ", long ll1 $^{\circ}23\,^{\circ}20$ ", in sec.29, T.32 S., R.5 E. (unsurveyed), on right bank on State Highway U-54, 8 miles north of Boulder.

Drainage area. -- 1.9 sq mi, approximately.

Gage.--Recording at different datum July 1950 to September 1955; crest-stage gage at present datum since 1959. Altitude of gage is 8,600 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 12 cfs and extended above on basis of slope-area measurement at 224 cfs.

Remarks .-- Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951 1952 1953	Aug. 4, 1951 Aug. 27, 1952 Aug. 27, 1953	1.36 1.43 .91	14 18 4.3	1959 1960	Aug. 19, 1959 May 1960	10.53 11.35	12 60
1954 1955	Apr. 13, 1954 Aug. 6, 1955	.84 2.76	4.1 350	1961 1962	Aug. 3, 1961 Sept.21, 1962	12.36 10.02	224 2

3390. Boulder Creek near Boulder, Utah

<u>Location</u>.--Lat 37°48', long 111°23', in $S\frac{1}{2}$ sec.32, T.34 S., R.5 E., on right bank 6 miles south of Boulder and 12 miles northeast of Escalante.

Drainage area. -- 175 sq mi.

Gage .-- Recording. Altitude of gage is 5,200 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs and extended above on basis of slope-area measurement at gage height 3.70 ft and logarithmic plotting.

 $\frac{\text{Remarks.}\text{--}\text{Diversion for irrigation of about 1,900 acres above station does not }}{\text{materially affect peak flows.}} \text{ Base for partial-duration series, 300 cfs.}$

Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 22, 1951 May 28, 1951	3.35 3.71	320 398	1953	Aug. 27, 1953	3.91	438
	Aug. 3, 1951	4.10	486	1954	Nov. 17, 1953	3.46	344
	Aug. 23, 1951	3.55	367		July 24, 1954	3.40	331
	Aug. 29, 1951	3.90	449		Sept.25, 1954	4.28	527
1952	Aug. 28, 1952	4.34	542	1955	Oct, 7, 1954	3,40	333
	Sept.16, 1952	3.57	365		Oct. 8, 1954	4.07	484
	Sept.21, 1952	3.89	436	1	July 25, 1955 Aug. 7, 1955	10.25 3.16	4,650 325
1953	July 31, 1953	3.66	376		Aug. 7, 1935	3.10	525

3395. Escalante River at mouth, near Escalante, Utah

<u>Location</u>.--Lat 37°19', long 110°54' (unsurveyed), on left bank 2.2 miles downstream from Davis Gulch, 5.1 miles upstream from mouth, and about 50 miles southeast of Escalante.

Drainage area. -- 1,770 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 3,380 ft (from river-profile map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below 2,800 cfs.}$

Remarks. -- Diversions for irrigation of about 4,500 acres above station do not materially affect peak flows. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge	
1950 a/	July 7, 1950 July 18, 1950	2.35 2.45	1,130 1,320	1954	July 24, 1954 Sept.13, 1954	2.67 2.77	1,560 1,580	
1951	Aug. 4, 1951 Aug. 30, 1951	11.43 5.75	14,600 5,370	1955	Oct. 7, 1954 Oct. 9, 1954	8.10 7.00	8,960 7,260	
1952	Sept.22, 1952	3.45	2,820		July 26, 1955 Aug. 4, 1955 Aug. 14, 1955	3.30 2.15 2.80	2,280 1,130 1,800	
1953	July 18, 1953 Aug. 1, 1953 Aug. 28, 1953	9.41 2.50 9.24	10,700 1,240 10,600		Aug. 17, 1955	2.90	1,890	

a Period April to September.

3399. East Fork San Juan River above Sand Creek, near Pagosa Springs, Colo.
(Published as "San Juan River" prior to October 1959)

<u>Location</u>.--Lat 37°23'25", long 106°50'25", in NE $\frac{1}{4}$ sec.4, T.36 N., R.1 E., on right bank 0.3 mile upstream from Sand Creek, 4 miles upstream from West Fork San Juan River, and 13 miles northeast of Pagosa Springs.

Drainage area. -- 64.1 sq mi.

Gage .-- Recording. Altitude of gage is 8,900 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 840 cfs.

 $\underline{\text{Remarks.}}\text{--No}$ diversion above station. Peaks are principally from snowmelt. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	June 6, 1957 June 20, 1957 July 8, 1957 July 27, 1957	6.32 6.09 5.49 5.76	1,210 1,100 821 938	1960	June 4, 1960 June 10, 1960 June 17, 1960	4.98 4.78 4.93	601 511 578
1958	May 12, 1958 May 19, 1958 May 27, 1958 June 3, 1958	4.86 5.04 5.35 5.17	56 4 636 762 688	1961 1962	May 22, 1961 Apr. 19, 1962 May 12, 1962	4.65 4.85 4.99	448 547 615
1959	June 7, 1959	4.33	352				

3400. East Fork San Juan River near Pagosa Springs, Colo. (Published as "San Juan River" prior to October 1959)

<u>Location</u>.--Lat 37°22'00", long 106°53'40", in $SE_{\pi}^{\frac{1}{4}}$ sec.12, T.36 N., R.1 W., a quarter of a mile upstream from private highway bridge, half a mile upstream from West Fork, and 9.5 miles northeast of Pagosa Springs.

Drainage area. -- 86.9 sq mi.

Gage.--Recording. At site a quarter of a mile downstream at different datum prior to Sept. 8, 1938. Datum of gage is 7,597.63 ft above mean sea level, datum of 1929.

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below 1,300~cfs.

Bankfull stage .-- 7 ft.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Diversions for irrigation of a few hundred acres of hay meadows do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 600 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 26, 1935 June 14, 1935	3.46 3.98	982 1,480	1938	May 28, 1938 June 29, 1938	4.00 2.94	1,670 688
1936	Apr. 21, 1936 May 5, 1936	2.96 3.31	682 931	1939	May 19, 1939	2.81	580
	May 20, 1936	3.05	698	1940	May 17, 1940	2.87	606
1937	Apr. 16, 1937 Apr. 21, 1937 Apr. 26, 1937 May 18, 1937 June 1, 1937	3.11 3.00 2.98 3.45 3.08	778 690 674 1,120 754	1941	May 12, 1941 May 24, 1941 June 8, 1941 June 19, 1941	4.84 3.75 3.70 3.78	2,070 1,360 1,250 1,410
	June 17, 1937	3.05	682	1942	Oct. 14, 1941 Apr. 22, 1942	3.89 3.10	1,330 790
1938	Apr. 24, 1938 Apr. 30, 1938 May 15, 1938	3.23 3.20 3.27	953 908 917		May 10, 1942 May 26, 1942	3.40 3.79	990 1,260

Peak stages and discharges of East Fork San Juan River near Pagosa Springs, Colc .-- Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 1, 1943 June 30, 1943	3.00 3.30	640 830	1952	June 10, 1952 July 5, 1952	4.12 2.86	1,850 683
1944	May 16, 1944 May 23, 1944 June 1, 1944	3.84 3.65 3.80	1,410 1,280 1,330	1953	May 28, 1953 June 13, 1953	3.28 2.97	1,050 786
	June 10, 1944	3.40	998	1954	July 22, 1954	2.76	550
1945	May 13, 1945 May 29, 1945	3.34 3.67	998 1,140	1955	June 9, 1955	2.72	557
	June 6, 1945 June 14, 1945	3.64 3.83	1,020	1956	June 1, 1956	3.46	al,170
1946	June 7, 1946	2.90	590	1957	June 6, 1957 June 20, 1957 July 27, 1957	4.39 4.08 4.08	1,550 1,230 1,230
1947	May 10, 1947	3.14	724	1958	May 12, 1958	3.57	782
1948	Apr. 20, 1948 Apr. 30, 1948 May 6, 1948	3.06 3.38 3.34	751 952 926	1936	May 26, 1958 June 6, 1958	3.91 3.59	1,030 770
	May 21, 1948	4.18	1,510	1959	June 7, 1959	2.77	388
1949	May 16, 1949 May 29, 1949 June 5, 1949 June 18, 1949 June 23, 1949 July 11, 1949	3.85 3.72 3.60 4.11 3.78 2.90	959 959 881 1,270 1,040 703	1960	Mar. 17, 1960 May 13, 1960 June 4, 1960 June 10, 1960 June 17, 1960	b3.76 3.48 3.65 3.40 3.39	- 759 865 715 704
1950	May 24, 1950	2.52	463	1961	Mar. 15, 1961 May 22, 1961	b3.70 3.30	- 610
1951	May 27, 1951	3.05	709	1962	Apr. 20, 1962	3.70	820 880
1952	May 6, 1952 May 16, 1952	4.03 3.77	1,760 1,520		May 10, 1962 June 13, 1962	3.80 3.35	625

a Annual peak only. b Backwater from ice.

3405. West Fork San Juan River above Borns Lake, near Pagosa Springs, Colo.

Location. --Lat 37°29'00", long 106°55'50", in sec.36, T.38 N., R.1 W., half a mile downstream from Beaver Creek, $1\frac{1}{2}$ miles upstream from Borns Lake, and 16 miles northeast of Pagosa Springs.

Drainage area. -- 41.2 sq mi.

Gage .-- Recording. Altitude of gage is 8,400 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 750 cfs.

Bankfull stage .-- 12 ft.

Historical data .-- Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks. -- No diversion or regulation. Peaks are principally from snowmelt. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 17, 1937	4.23	783	1942	May 26, 1942 June 11, 1942	3.75 4.25	786 1,090
1938	June 3, 1938 June 29, 1938	4.43 3.58	1,100 669		June 17, 1942	3.98	924
	1	!		1943	Apr. 30, 1943	3.55	585
1939	May 9, 1939	3.37	505	! !	June 1, 1943	3.61	585
	May 19, 1939 June 4, 1939	3.33	535 525		June 30, 1943	3.50	530
	1	ı		1944	May 14, 1944	3.88	590
1940	May 14, 1940	3.31	430		May 23, 1944 May 31, 1944	3.97 4.24	635 770
1941	May 13, 1941 May 26, 1941	4.33 3.88	690 533		June 10, 1944	4.35	825
	June 23, 1941	4.87	888	1945	May 27, 1945	3.81	594
	July 5, 1941	-	750	[[June 5, 1945	3.61	504

Peak stages and discharges of West Fork San Juan River above Borns Lake, near Pagosa Springs, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 14, 1945	3.96	662	1949	July 6, 1949	4.43	870
1946	June 4, 1946	4.01	655	1950	June 1, 1950	3.64	488
1947	June 7, 1947 Sept.18, 1947	3.85 3.82	565 560	1951	May 27, 1951	3.80	605
1948	May 19, 1948 June 3, 1948 June 12, 1948	4.49 4.63 4.60	900 970 955	1952	May 14, 1952 June 3, 1952 June 10, 1952	3.93 4.68 4.75	525 928 1,210
1949	June 5, 1949 June 18, 1949	3.84 5.24	593 1,290	1953	May 27, 1953 May 31, 1953 June 4, 1953	4.05 3.94 3.94	555 501 501

3415. West Fork San Juan River near Pagosa Springs, Colo.

<u>Location</u>.--Lat 37°22'40", long 106°54'00", in SE_{π}^{1} sec.1, T.36 N., R.1 W., on left bank 30 ft upstream from bridge on U.S. Highway 160, 0.9 mile upstream from mouth, and 10 miles northeast of Pagosa Springs.

Drainage area. -- 87.9 sq mi.

Gage.--Recording. At two sites within 30 ft, a quarter of a mile downstream at datum 8.83 ft lower prior to Aug. 25, 1954. Datum of gage is 7,614.40 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1.800 cfs.

<u>Historical data.</u>--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Diversions for irrigation of 610 acres. Treasure Pass ditch above station exports water to Rio Grande basin. Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 900 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water. year	Date	Gage height (feet)	Discharge (cfs)
1935	June 15, 1935	6.23	2,250	1947	June 7, 1947	3.75	984
1936	May 5, 1936 May 20, 1936	4.85 4.30	1,210 980	1948	May 19, 1948 June 3, 1948 June 12, 1948	5.55 6.14 5.45	1,620 1,780 1,500
1937	May 17, 1937	5.04	1,670	1949	June 5, 1949	4.05	988
1938	May 16, 1938 May 28, 1938 June 13, 1938 June 23, 1938	3.85 5.61 5.68 5.70	962 2,030 1,640 1,640		June 18, 1949 July 7, 1949 July 11, 1949	6.45 4.67 3.90	2,260 1,300 920
	June 29, 1938	5.60	1,740	1950 1951	June 1, 1950	3.42	768
1939	May 19, 1939	3.53	850		May 27, 1951	4.05	1,020
1940	May 14, 1940	3.25	735	1952	May 5, 1952 May 15, 1952 June 15, 1952	3.82 3.82 5.73	1,010 1,180 2,330
1941	May 13, 1941 May 26, 1941 June 8, 1941	5.72 4.31 4.74	2,090 1,320 1,620	1953	May 28, 1953	3.41	1,000
	June 23, 1941 July 5, 1941	5.83 5.34	2,300	1954	May 21, 1954	3.48	787
1942	June 11, 1942	4.65	1,420	1955	June 8, 1955	3.50	1,110
1943	May 1, 1943	3.41	878	1956	June 1, 1956	3.42	993
1944	May 15, 1944 June 1, 1944 June 10, 1944	4.58 4.77 4.89	1,470 1,560 1,620	1957	June 5, 1957 June 20, 1957 June 26, 1957	3.92 4.04 4.30	1,590 1,740 2,100
	June 21, 1944	5.00	1,680	1958	May 29, 1958 June 6, 1958	3.65 3.90	1,450 1,660
1945	May 27, 1945 June 7, 1945 June 14, 1945	3.66 3.18 3.95	1,140 906 1,280	1959	June 6, 1959	2.82	682
1946	June 5, 1946	3.28	901	1960	June 4, 1960 June 17, 1960	3.35 3.45	1,090 1,210

3420. Turkey Creek near Pagosa Springs, Colo.

<u>Location</u>.-Lat $37\,^\circ22\,^\circ20\,^\circ$, long $106\,^\circ56\,^\circ40\,^\circ$, in sec.10, T.36 N., R.1 W., $2\,\frac{1}{5}$ miles upstream from mouth and 8 miles northeast of Pagosa Springs.

Drainage area .-- 23.0 sq mi.

Gage.--Recording. Datum of gage is 7,617.49 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 550 cfs.

Historical data. -- Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Large part of the flow is diverted from drainage basin for irrigation during the season. Diversions substantially affect maximum flows. Orly annual peaks are shown.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937 1938 1939	May 8, 1937 May 2s, 1938 May 10, 1939	2.95 3.20 2.27	463 602 209	1944 1945	May 14, 1944 May 27, 1945	2.97 2.33	452 262
1940	May 4, 1940	2.33	209	1946 1947	June 5, 1946 May 10, 1947	2.09 2.16	157 181
1941 1942 1943	May 12, 1941 May 26, 1942 May 1, 1943	3.73 2.58 2.45	860 332 260	1948 1949	May 20, 1948 June 18, 1949	2.90 3.13	450 527

3425. San Juan River at Pagosa Springs, Colo.

Location. --Lat 37°15'50", long 107°00'40", in $S^{\frac{1}{2}}$ sec.13, T.35 N., R.2 W., on right bank at former bridge site in Pagosa Springs, 0.2 mile upstream from McCabe Creek, 0.6 mile downstream from U.S. Highway 160 at town of Pagosa Springs, and 2 miles upstream from Mill Creek.

Drainage area. -- 298 sq mi.

Gage.--Nonrecording prior to Nov. 15, 1914; recording thereafter. At present site at different datum Mar. 7 to Oct. 4, 1911. At site 300 ft downstream at different datum Nov. 23, 1911, to Nov. 14, 1914. Datum of gage is 7,052.04 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,400 cfs and extended to 25,000 cfs on basis of area-velocity study.

Historical data. -- Maximum stage known, that of Oct. 5, 1911.

Remarks.--Diversions for irrigation of about 5,400 acres do not substantially affect peak flows. Base for partial-duration series, 1,510 cfs. Only annual peaks are shown prior to 1936.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911 1912 1913	July 2, 1911 Oct. 5, 1911 May 26, 1913	5.5 al7.8 5.7	3,500 25,000 1,860	1938	Apr. 23, 1938 May 16, 1938 May 29, 1938	5.77 5.57 6.58	2,390 2,050 3,970
1914 1927	June 2, 1914 June 29, 1927	7.7 b13.5	3,550 c16,000		June 29, 1938 Sept.12, 1938	5.76 5.25	2,370 1,580
1935	June 15, 1935	6.72	4,710	1939	May 22, 1939	5.22	1,510
1936	Apr. 22, 1936	5.32	1,580	1940	May 17, 1940	5.16	1,600
	May 5, 1936 May 20, 1936	5.84 5.32	2,400 1,720	1941	Oct. 5, 1940 May 13, 1941 June 8, 1941	5.22 7.92 6.85	1,370 5,790 3,900
1937	Apr. 15, 1937 Apr. 26, 1937	5.71 5.18	2,730 1,870		June 23, 1941	7.36	4,820
	May 18, 1937	6.19	3,120	1942	Oct. 14, 1941	6.72	3,660

a From floodmarks. b From information by local residents.

e About.

Peak stages and discharges of San Juan River at Pagosa Springs, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Apr. 14, 1942 Apr. 22, 1942 May 11, 1942	5.57 6.55 5.57	1,930 3,690 2,160	1952	May 14, 1952 June 10, 1952	6.64 7.65	2,950 4,960
	May 27, 1942	6.60	3,600	1953	May 28, 1953 June 12, 1953	6.31 5.91	2,480 2,000
1943	May 1, 1943 June 1, 1943 June 30, 1943	5.60 5.37 5.69	2,200 1,880	1954	May 21, 1954	5.57	1,630
1944	May 16, 1944	7.17	2,240 4,540	1955	May 30, 1955 June 8, 1955	5.50 6.04	1,570 2,030
	May 24, 1944 June 11, 1944	6.72 6.71	3,680 3,660	1956	May 7, 1956	5,64	1,650
1945	May 11, 1945 May 28, 1945	5.58 5.98	2,250 2,750		May 21, 1956 June 2, 1956	5.96 6.45	1,870 2,440
	June 14, 1945	5.81	2,480	1957	May 8, 1957 June 6, 1957	5.94 8.72	2,030 4,620
1946	June 4, 1946	5.12	1,500		June 21, 1957 July 9, 1957	8.42 6.66	4,260 2,230
1947	May 10, 1947 June 7, 1947	5.31 5.23	1,750 1,660	1958	July 26, 1957 Apr. 21, 1958	8.96 6.02	4,910 2.010
1948	Apr. 20, 1948 May 7, 1948	5.28 5.52	1,600 1,860	1958	May 12, 1958 May 20, 1958 May 27, 1958	6.23 6.58 7.19	1,980 2,300 2,930
1949	Apr. 25, 1949 May 2, 1949	5.47 5.42	1,810 1,760		June 6, 1958	6.80	2,520
	May 16, 1949 May 31, 1949	5.81 5.80	2,160 2,150	1959	June 6, 1959	3.80	1,200
	June 6, 1949 June 19, 1949 July 7, 1949	6.00 7.97 6.28	2,380 5,420 2,370	1960	Apr. 10, 1960 May 13, 1960 June 4, 1960	4.57 4.84 5.49	2,010 1,920 2,420
1950	May 24, 1950 June 1, 1950	5.60 5.67	1,590 1,670		June 10, 1960 June 17, 1960	5.04 5.43	1,890 2,320
1951	May 28, 1951	6.15	2,260	1961	May 22, 1961	4.79	1,870
1952	Apr. 18, 1952 Apr. 27, 1952 May 6, 1952	5.69 5.64 6.76	1,760 1,700 3,150	1962	Apr. 19, 1962 May 11, 1962 June 12, 1962	5.09 5.44 5.02	2,060 2,410 1,880

3430. Rio Blanco near Pagosa Springs, Colo.

Location.--Lat 37°12'46", long 106°47'38", in center of sec.1, T.34 N., R.1 E., on right bank 40 ft downstream from highway bridge, 0.4 mile upstream from Leche Creek, 1½ miles downstream from Fish Creek, and 12.5 miles southeast of Pagosa Springs.

Drainage area. -- 58.0 sq mi.

Gage .-- Recording. Altitude of gage is 7,950 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 870 cfs.

Bankfull stage .-- 3 ft.

Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Diversions for irrigation of 350 acres do not substartially affect peak flows. Base for partial-duration series, 800 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1935	June 13, 1935 July 14, 1935 Aug. 4, 1935	3.58 3.75 3.70	1,230 945 909	1937	June 26, 1937 July 29, 1937	3.61 3.60	1,010 1,040			
	Aug. 11, 1935	3,75	972	1938	May 29, 1938 June 21, 1938	3.80 3.21	880 820			
1936	May 5, 1936 Aug. 6, 1936	4.08 3.90	1,130 1,340		June 29, 1938	3.48	1,040			
1937	May 17, 1937	4.06	1,340	1939	Sept.11, 1939	2.92	466			

Peak stages and discharges of Rio Blanco near Pagosa Springs, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1940	May 17, 1940	2.97	506	1952	June 6, 1952	3.68	932
1941	May 11, 1941 June 2, 1941	3.77 2.75	1,260 965	1953	July 19, 1953	2.81	584
	July 19, 1941	3.72	800	1954	July 22, 1954	2.21	492
1942	Oct. 12, 1941	3.32	1,490	1955	Aug. 8, 1955	2.76	756
1943	June 30, 1943	3.84	1,270	1956	June 2, 1956	3.40	514
1944	May 14, 1944 May 23, 1944	3.89 3.92	840 906	1957	June 7, 1957 June 29, 1957 July 26, 1957	- -	1,400 1,300 1,600
1945	May 27, 1945	3.60	886		Aug. 30, 1957	3.39	1,100
1946	Sept.18, 1946	3.35	772	1958	May 27, 1958 Sept.13, 1958	- 3.55	850 1,330
1947	Aug. 4, 1947 Aug. 22, 1947	3.50 3.49	880 8 44	1959	May 14, 1959	2.20	430
1948	June 3, 1948	4.00	760	1960	May 12, 1960 June 3, 1960	2.57	- 588
1949	June 18, 1949	4.12	958	1961	-	2.15	492
1950	July 10, 1950	3.76	834		Sept.18, 1961	2,13	
1951	May 27, 1951	3.20	590	1962	May 10, 1962 May 13, 1962	2.42	744

3435. Rito Blanco near Pagosa Springs, Colo.

<u>Location</u>.--Lat 37°11'40", long 106°54'20", in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.12, T.34 N., R.1 W., on left bank 130 ft downstream from highway bridge, 470 ft upstream from Sheep Cabin Creek, and $7\frac{3}{4}$ miles southeast of Pagosa Springs.

Drainage area. -- 23.3 sq mi.

Gage.--Recording. At several sites within 130 ft of present site at various datums prior to Oct. 1, 1951. Altitude of gage is 7,330 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 350 cfs.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

 $\underline{\text{Remarks.}\text{--}\text{Diversions}}$ for irrigation of 750 acres substantially affect flows below 250 cfs. Base for partial-duration series, 90 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 13, 1935 May 20, 1935	2.40 2.67	118 200	1941	June 23, 1941	2.78	228
	June 9, 1935	2.87	310	1942	Oct. 14, 1941	3.24	387
1936	Apr. 12, 1936	2.68	250		Apr. 17, 1942 Apr. 21, 1942	3.07 2.70	315 198
1350	Apr. 21, 1936	2.60	203	11	May 20, 1942	1.88	116
	May 4, 1936	2.53	179		May 29, 1942 July 17, 1942	2.01	153 110
1937	Apr. 15, 1937	2.78	302	}}	oury ri, roll	2.10	110
	Apr. 26, 1937	2.55	218	1943	Apr. 5, 1943	2.25	96
	May 13, 1937	2.65	240	!	Apr. 23, 1943	2.32	112
	May 30, 1937	2.40	136		June 30, 1943	2.37	108
1938	Apr. 23, 1938	2.73	243	1944	May 14, 1944	2.90	290
	May 14, 1938	2.60	196		May 23, 1944	2.54	177
	May 28, 1938	2.62	203		June 9, 1944	2.40	130
1939	Mar. 20, 1939	-	92	1945	May 4, 1945	2.63	232
	Apr. 28, 1939	2.29	96		May 27, 1945	2.38	156
1940	Apr. 22, 1940	2.18	95	1946	Apr. 21, 1946	1.98	59
	May 3, 1940	2.18	95				
	May 17, 1940	2.31	134	1947	May 10, 1947	2.25	93
1941	Apr. 29, 1941	2.32	135	1948	Apr. 19, 1948	2.48	138
	May 13, 1941	3.21	475		Apr. 30, 1948	2.50	130
	June 3, 1941	1.25	208		May 7, 1948	2.59	156

Peak stages and discharges of Rito Blanco near Pagosa Springs, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 20, 1948 June 3, 1948	2.63 2.55	184 159	1950	Apr. 21, 1950	2.14	88
1040	Amm 05 3040	0.57	304	1951	May 28, 1951	2.21	105
1949	Apr. 25, 1949 May 2, 1949 May 15, 1949 May 26, 1949 June 5, 1949 June 18, 1949	2.53 2.45 2.53 2.47 2.34 2.60	194 165 190 171 128 215	1952	Apr. 27, 1952 May 5, 1952 May 14, 1952 June 3, 1952	2.85 3.20 3.02 3.00	182 370 298 290

3440. Navajo River at Banded Peak Ranch, near Chromc, Colo.

<u>Location</u>.--Lat 37°05'07", long 106°41'20", in NW_{u}^{1} sec.24, T.35 N., R.2 E., on left bank at downstream side of private bridge on Banded Peak Ranch, half a mile downstream from Aspen Creek, 4 miles downstream from East Fork, and 9 miles northeast of Chromo.

Drainage area .-- 69.8 sq mi.

Gage.--Recording. At datum 3.00 ft higher prior to Oct. 1, 1949. Datum of gage is 7,940.6 ft above mean sea level (river-profile survey).

Stage-discharge relation. -- Defined by current-meter measurements below 1,200 cfs.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Diversions for irrigation of 430 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 530 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height (feet) height Date (cfs) year (cfs) year (feet) 1937 May 17, 1937 3,27 1951 683 May 27, 1951 4.55 640 1938 Apr. 25, 1938 May 28, 1938 2.91 605 1952 May 5, 1952 4.31 680 June 8, 1952 June 30, 1952 4.89 2.97 3.42 876 964 565 1939 Mav 19, 1939 3.07 466 1, 1952 Aug. 3.30 730 May 28, 1953 June 2, 1953 June 9, 1953 June 17, 1953 1940 May 31, 1940 3.05 500 1953 3.54 547 3.41 3.46 543 1941 May 13, 1941 4.02 1,340 558 June 26, 1941 3.24 745 3.56 588 1942 May 26, 1942 3.02 760 1954 May 21. 1954 2.61 355 1943 May 2, 1943 530 1955 2.47 June 8, 1955 3,22 637 June 30, 1943 2.70 630 1956 June 2, 1956 3.19 547 May 15, 1944 May 24, 1944 June 10, 1944 2.78 2.72 2.69 1944 773 1957 June 7, 1957 740 3.84 1,160 June 29, 1957 July 26, 1957 Aug. 30, 1957 685 3.90 3.97 1,120 1,180 1945 May 4, 1945 2.56 645 3,40 945 May 27, 1945 June 5, 1945 2.53 685 2.43 635 1958 May 12, 1958 3,60 645 May 27, 1958 June 6, 1958 Sept.12, 1958 June 13, 1945 2,60 665 3,55 980 3.37 856 1946 June 5, 1946 2.60 530 3.10 780 1947 June 7, 1947 525 1959 2.42 June ·6, 1959 3.29 442 May 21, 1948 June 3, 1948 1948 2.71 695 1.960 June 3, 1960 3.85 630 June 3, 1948 June 11, 1948 June 10, 1960 June 17, 1960 2.76 720 3,25 558 2.67 675 3.58 710 1961 May 27, 1961 3.46 530 1949 June 18, 1949 June 24, 1949 850 Apr. 19, 1962 May 10, 1962 June 13, 1962 2.04 748 1962 3.53 640 3.38 580 1950 May 4.17 31, 1950 338 3.33 555 3443. Navajo River above Chromo, Colo.

Location.--Lat 37°01'55", long 106°43'56", in NE_{π}^{1} sec.9, T.32 N., R.2 E., on right bank 5 ft downstream from private road bridge, 6 miles east of Chromo, and 7 miles upstream from Little Navajo River.

Drainage area .-- 96.4 sq mi.

Gage. -- Recording. Altitude of gage is 7,700 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 930 cfs.

Remarks.--Diversions above station for irrigation of about 1,000 acres do not materially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 550 cfs.

		_	
Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	June 7, 1957 June 29, 1957	5.95 5.78	1,340 1,120	1959	June 7, 1959	4.79	474
	July 26, 1957 Aug. 30, 1957	6.00 5.12	1,270 647	1960	Apr. 9, 1960 June 3, 1960 June 10, 1960	4.69 5.01 4.97	582 617 589
1958	Apr. 22, 1958 May 12, 1958 May 27, 1958	5.28 5.23 5.67	766 731 1,040	1961	June 17, 1960 May 27, 1961	5.15 4.88	720 554
_	June 6, 1958 Sept.13, 1958	5.43 5.65	871 1,070	1962	Apr. 19, 1962 May 10, 1962	5.04 5.05	651 665

3455. Little Navajo River at Chromo, Colo.

<u>Location</u>.--Lat 37°02'10", long 106°50'40", in SE $\frac{1}{4}$ sec.4, T.32 N., R.1 E., 400 ft upstream from bridge on U.S. Highway 84 at Chromo, a quarter of a mile upstream from mouth.

Drainage area. -- 21.9 sq mi.

Gage.--Recording. At site 600 ft downstream at different datum prior to Nov. 22, 1939. At site 200 ft downstream at datum 5.00 ft lower Nov. 22, 1939, to Oct. 31, 1947. Datum of gage is 7,293.52 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 250 cfs.

Bankfull stage .-- 5 ft.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Diversions for irrigation of 650 acres substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 80 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Mar. 14, 1936 Apr. 13, 1936	2.88 3.90	87 227	1941	Apr. 27, 1941 May 14, 1941 June 8, 1941	3.32 4.32 4.14	322 399 332
1937	Apr. 15, 1937 Apr. 26, 1937	4.70 4.27	360 195		June 24, 1941	3.82	145
	May 6, 1937	4.24	184	1942	Oct. 14, 1941 Apr. 5, 1942	4.25 4.27	228 235
1938	Apr. 25, 1938 May 15, 1938 June 28, 1938 July 14, 1938	4.41 4.00 3.92 4.40	202 134 106 187		Apr. 17, 1942 Apr. 22, 1942 May 9, 1942 May 23, 1942	4.55 4.96 3.66 3.46	285 366 141 111
1939	Mar. 23, 1939	4.11	130	1943	Mar. 29, 1943	3.40	96
1940	Apr. 14, 1940	2.66	63		Apr. 3, 1943 Apr. 23, 1943 Apr. 30, 1943	3.42 3.75 3.61	90 128 106
1941	Mar. 31, 1941 Apr. 9, 1941 Apr. 12, 1941	2.87 2.87 2.75	166 166 128	1944	Apr. 4, 1944 Apr. 6, 1944	3.78 3.48	78

Peak stages and discharges of Little Navajo River at Chromo, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Apr. 23, 1944 May 5, 1944	3.51 3.72	86 139	1948	May 6, 1948	2.96	101
	May 14, 1944	3.64	130	1949	Apr. 12, 1949 Apr. 25, 1949	3.05 3.40	87 138
1945	Apr. 2, 1945 Apr. 7, 1945 Apr. 20, 1945	3.16 3.39 3.30	96 129 116		May 2, 1949 May 11, 1949	3.32 3.49	126 134
	May 5, 1945	3.60	160	1950	Apr. 21, 1950	2.92	66
1946	Apr. 17, 1946	2.65	36	1951	May 26, 1951	3.01	77
1947	May 10, 1947 Aug. 22, 1947	3.08 3.20	85 105	1952	Apr. 5, 1952 Apr. 27, 1952	3.26 3.38	182 168
1948	Apr. 19, 1948 Apr. 30, 1948	3.22 3.00	118 105		May 4, 1952 June 3, 1952	3.82 3.19	256 138

3460. Navajo River at Edith, Colo.

<u>Location</u>.--Lat 37°00'10", long 106°54'25", in $NW_{\overline{u}}^1$ sec.24, T.32 N., R.1 W., on right bank 390 ft downstream from highway bridge at Colorado-New Mexico State line, a quarter of a mile east of Edith, and 1 mile unstream from Coyote Creek.

Drainage area. -- 172 sq mi.

<u>Gage.</u>--Recording. At sites 210 and 240 ft upstream at datum 2.0 ft higher June 2, 1935, to June 27, 1941. Datum of gage is 7,033.00 ft above mean sea level (Bureau of Reclamation bench mark).

Historical data. -- Maximum flood known occurred Oct. 5, 1911.

Remarks.--Diversions for irrigation of 1,700 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1915-28 furnished by State engineer of New Mexico. Base for partial-duration series, 600 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 16, 1935	4.89	1,360	1944	May 15, 1944	4.54	956
1936	Apr. 12, 1936 May 5, 1936 May 17, 1936	4.65 4.13 3.70	1,180 910 710		May 24, 1944 May 30, 1944 June 21, 1944	4.42 4.36 4.52	836 792 916
	Aug. 5, 1936	4.10	900	1945	Apr. 21, 1945 May 5, 1945	4.15 4.77	655 1,150
19. "	Apr. 15, 1937 Apr. 26, 1937 May 15, 1937 June 2, 1937	5.77 4.32 4.45 3.62	2,370 1,260 1,290 712		May 28, 1945 June 6, 1945 June 14, 1945	4.53 4.32 4.39	944 776 824
				1946	June 6, 1946	4.05	585
1938	Apr. 21, 1938 Apr. 30, 1938 May 15, 1938	4.57 4.15 4.27	1,410 1,070 1,130	1947	May 10, 1947	4.28	746
	May 28, 1938 June 29, 1938	4.55 3.71	1,310 810	1948	May 22, 1948 June 4, 1948 June 12, 1948	4.43 4.47 4.72	685 705 852
1939	Mar. 23, 1939	3.61	786	3040			
1940	May 18, 1940	3.41	635	1949	Apr. 26, 1949 May 16, 1949 May 27, 1949	4.40 4.26 4.43	670 600 685
1941	May 13, 1941 June 8, 1941 June 26, 1941	6.36 5.32 4.80	2,380 1,660 1,420		June 6, 1949 June 19, 1949 June 24, 1949	4.35 5.12 4.9	645 1,270 1,070
1942	Oct. 14, 1941 Apr. 5, 1942	4.98 5.06	1,460 1,530	1950	June 1, 1950	3.82	399
	Apr. 17, 1942 Apr. 23, 1942	5.30 6.55	1,720 2,840	1951	May 28, 1951	4.44	690
	May 10, 1942 May 27, 1942	4.32 4.59	936 1,150	1952	Apr. 7, 1952 May 4, 1952	4.45 4.88	870 1,190
1943	May 3, 1943	4.09	714		May 14, 1952 June 16, 1952	4.66 5.05	1,000 1,340

Peak stages and discharges of Navajo River at Edith, Colo .-- Continued

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	June 3, 1953	4.21	638	1958	June 7, 1958 Sept.13, 1958	4.58 4.71	905 1,020
1954	May 21, 1954	3.85	425	1959	June 7, 1959	3.77	350
1955	Feb. 25, 1955 June 9, 1955	a4.39 4.01	506	1960	Mar. 21, 1960 Mar. 26, 1960	a4.97 4.67	- 954
1956	June 2, 1956	4.27	626		Apr. 10, 1960 June 4, 1960	4.40 4.47	775 756
1957	May 9, 1957 June 8, 1957	4.35 5.25	768 1,320		June 17, 1960	4.42	690
	June 29, 1957 July 27, 1957	5.12 5.16	1,180 1,220	1961	Mar. 15, 1961 May 23, 1961	a4.61 4.35	- 580
1958	Apr. 19, 1958 May 12, 1958 May 28, 1958	5.15 4.68 4.82	1,160 898 1,080	1962	Mar. 14, 1962 Apr. 17, 1962 May 10, 1962	a5.47 5.09 4.90	- 922 765

a Backwater from ice.

3475. Piedra River at Bridge ranger station, near Pagosa Springs, Colo.

Location.--Lat 37°25'40", long 107°11'30", in sec.22, T.37 N., R.3 W., on left bank 350 ft upstream from highway bridge, 1,000 ft downstream from Bridge ranger station, 1 mile downstream from Middle Fork, and 15 miles northwest of Pagosa Springs.

Drainage area. -- 82.3 sq mi.

<u>Gage.</u>--Recording. At site 350 ft downstream at datum 4.27 ft lower prior to July 10, 1946. Datum of gage is 7,640.35 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 1,100 cfs.

Historical data .-- Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Diversions for irrigation of 1,800 acres. Piedra Pass ditch above station exports water to Rio Grande basin. Base for partial-duration series, 600 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 16, 1937	3.37	776	1947	Sept.18, 1947	4.98	770
1938	May 28, 1938 June 13, 1938 June 22, 1938 June 29, 1938	3.90 3.63 3.55 3.63	1,060 991 940 991	1948	May 19, 1948 June 3, 1948 June 12, 1948	6.61 6.54 5.80	1,480 1,440 1,100
1939	Sept.12, 1938 Aug. 28, 1939	3.05	648 710	1949	May 29, 1949 June 18, 1949 July 7, 1949	4.59 7.52 5.47	616 1,800 808
1940	May 14, 1940	2.89	586	1950	May 31, 1950	4.45	450
1941	May 12, 1941 June 8, 1941	4.10 3.35	1,260 1,110	1951	May 27, 1951	5.17	750
	June 23, 1941 July 5, 1941	4.41 4.20	1,570 1,440	1952	May 5, 1952 May 14, 1952	4.98 4.93	810 715
1946	Aug. 12, 1946	4.55	633		June 10, 1952 July 5, 1952	6.53 5.45	1,520 975
1947	(a) June 7, 1947	4.64 5.03	(b) 830	1953	May 28, 1953	5.15	845
	Aug. 22, 1947	4.74	674	1954	May 21, 1954	4.55	560

a Occurred during period Apr. 4 to May 8, 1947. b Not determined; exceeded base discharge.

3485. Williams Creek near Bridge ranger station, near Pogosa Springs, Colo.

<u>Location</u>.~-Lat $37^{\circ}27'40"$, long $107^{\circ}11'50"$, in sec.10, T.37 N., R.3 W., $2\frac{1}{2}$ miles north of Bridge ranger station, $3\frac{1}{2}$ miles upstream from mouth, and 17 miles northwest of Pagosa Springs.

Drainage area. -- 43.7 sq mi.

Gage.--Recording. At different datum prior to May 28, 1946. Altitude of gage
is 7,810 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 450 cfs.

Bankfull stage.--4 ft.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks. -- Squaw Pass ditch diverts water to Rio Grande basin; diversions do not substantially affect peak flows. Base for partial-duration series, 280 cfs.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1937	May 27, 1937	3,02	473	1941	June 24, 1941	3.26	666			
1938	Apr. 24, 1938 May 15, 1938	2.66 2.59	379 345	1946	June 7, 1946	2.75	295			
	May 28, 1938 June 13, 1938	3.07 3.05	594 582	1947	May 5, 1947	2,65	280			
	June 22, 1938 June 29, 1938 Sept.11, 1938	2.76 3.24 2.95	428 687 528	1948	May 6, 1948 May 19, 1948 June 3, 1948	2.63 3.50 3.48	290 780 768			
1939	May 22, 1939	2.46	227		June 12, 1948	3.10	540			
1940	May 6, 1940	2.45	222	1949	Apr. 24, 1949 May 30, 1949 June 18, 1949	2.88 2.70 3.58	380 295 798			
1941	May 11, 1941	3.68	940	1	June 10, 1949	3.36	/98			

3490. Weminuche Creek near Bridge ranger station, near Pagosa Springs, Colo.

Location. --Lat 37°28'10", long 107°14'00", in sec.5, T.37 N., R.3 W., $3\frac{1}{2}$ miles northwest of Bridge ranger station, 5 miles upstream from mouth, and 19 miles northwest of Pagosa Springs.

Drainage area. -- 53.4 sq mi.

 $\frac{\text{Gage.--Recording.}}{7,957.86}$ ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation. -- Defined by current-meter measurements below 610 cfs.

<u>Historical data.</u>--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Diversions for irrigation of a few acres of hay meadows do not substantially affect peak flows. Peaks are principally from snowmelt. Base for partial-duration series, 250 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 17, 1937	4.16	501	1939	May 10, 1939 May 22, 1939	3.34 3.25	290 254
1938	Apr. 24, 1938 Apr. 30, 1938 May 16, 1938	3.97 3.83 3.88	430 394 412	1940	May 5, 1940	3.11	232
	May 29, 1938 June 13, 1938 June 29, 1938 Sept.11, 1938	4.65 4.35 4.73 4.12	639 549 651 518	1941	May 13, 1941 June 19, 1941 Sept.22, 1941	5.34 5.00 3.70	867 765 4 00

Peak stages and discharges of Weminuche Creek near Bridge ranger station, near Pagosa Springs, Colo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1946	June 6, 1946	4.21	325	1948	May 19, 1948 June 3, 1948	6.11 5.96	944 891
1947	May 5, 1947 June 7, 1947 Aug. 22, 1947	4.39 4.07 4.03	372 292 292	1949	May 16, 1949 May 26, 1949 June 6, 1949	4.45 4.75 4.68	375 465 444
1948	Oct. 14, 1947 May 7, 1948	3.92 4.38	261 384		June 19, 1949	6.07	904

3495. Piedra River near Piedra, Colo.

Location.--Lat 37°13'20", long 107°20'30", in $NW_{u}^{1}NW_{u}^{1}$ sec.17, T.34 N., R.4 W., on right bank 0.1 mile downstream from bridge on U.S. Highway 160, 0.4 mile upstream from Yellow Jacket Creek, and $1\frac{1}{2}$ miles north of Piedra.

Drainage area. -- 371 sq mi.

Gage. --Nonrecording May 10 to Sept. 27, 1941; recording during other periods. At site 2 miles upstream at different datum Mar. 20, 1940, to May 9, 1941. At site 0.3 mile upstream at different datum May 10, 1941, to Sept. 18, 1962. Altitude of gage is 6,510 ft (from topographic map).

 $\underline{\text{Stage-discharge relation}}$.--Defined by current-meter measurements below 2,800 cfs.

Remarks. --Diversions for irrigation of 2,200 acres. Also two small ditches divert water for irrigation. Two transmountain diversions above station export water to Rio Grande basin. Diversions do not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 1,300 cfs.

	reak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1940	May 5, 1940	4.43	1,220	1948	June 11, 1948	5.46	2,540			
1941	Oct. 5, 1940 May 13, 1941 June 8, 1941	5.03 8.0 6.20	1,780 5,400 3,270	1949	Apr. 25, 1949 May 3, 1949 May 11, 1949	5.22 5.22 5.16	2,230 2,230 2,150			
1942	June 25, 1941 Apr. 15, 1942	6.92 5.70	4,600		May 28, 1949 June 18, 1949	5.20 6.86	2,100 2,100 4,520			
2012	Apr. 23, 1942 May 11, 1942 May 27, 1942	6.20 4.88 5.75	3,600 1,800	1950	Apr. 24, 1950	4.24	1,110			
			2,950	1951	May 28, 1951	4.85	1,780			
1943	May 1, 1943	4.98	1,770	1952	Apr. 19, 1952 May 6, 1952	4.95 6.20	1,890 3,620			
1944	Apr. 28, 1944 May 15, 1944 May 24, 1944	4.53 6.82 5.93	1,400 4,810 3,480		June 3, 1952 July 6, 1952	6.75 4.43	4,440 1,370			
1945	June 11, 1944	5.40	2,720	1953	May 28, 1953 June 14, 1953	4.79 4.33	1,720 1,300			
1945	Apr. 21, 1945 May 4, 1945 May 18, 1945	4.62 5.22 4.56	1,510 2,220 1,640	1954	May 21, 1954	4.05	1,180			
	May 28, 1945 June 6, 1945 June 15, 1945	4.89 4.31 4.59	2,360 1,640 1,780	1955	May 9, 1955 May 30, 1955 June 9, 1955	4.23 4.26 4.64	1,300 1,310 1,640			
1946	June 8, 1946	4.52	1,400	1956	May 21, 1956	4.55	1,340			
1947	May 10, 1947 June 8, 1947 Aug. 23, 1947 Sept.18, 1947	4.90 4.53 4.49 4.42	1,940 1,510 1,470 1,390	1957	Apr. 17, 1957. May 7, 1957 June 6, 1957 June 20, 1957 July 26, 1957	4.60 4.70 6.60 6.10 8.60	1,480 1,570 3,490 2,780 6,870			
1948	Apr. 17, 1948 Apr. 20, 1948 Apr. 30, 1948	5.45 5.42 5.01	2,460 2,490 1,950		Aug. 7, 1957 Aug. 31, 1957	4.35 4.40	1,480 1,470			
	May 7, 1948 May 19, 1948 June 4, 1948	5.09 6.84 6.59	2,060 4,580 4,200	1958	Apr. 21, 1958 May 12, 1958 May 28, 1958	5.55 4.94 5.62	2,630 2,050 2,660			

Peak stages and discharges of Piedra River near Piedra, Colo. -- Continued

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	June 6, 1958	5.52	2,560	1960	June 18, 1960	4.63	1,560
1959	May 17, 1959	4.30	984	1961	May 2, 1961 May 20, 1961	4.38 4.68	1,310 1,560
1960	Apr. 12, 1960 Apr. 22, 1960 May 13, 1960 June 4, 1960	4.78 4.39 4.75 4.71	1,710 1,320 1,680 1,640	1962	Apr. 20, 1962 May 11, 1962 June 7, 1962	4.95 4.88 4.29	1,950 1,920 1,320

3505. San Juan River at Rosa, N. Mex.

<u>Location</u>.--Lat 37°00'20", long 107°24'10", in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.21, T.32 N., R.5 W., on right bank 75 ft upstream from highway bridge, a quarter of a mile downstream from Piedra River, 0.9 mile upstream from Colorado-New Mexico State line, and 1 mile north of Rosa.

Drainage area. -- 1,990 sq mi, approximately.

Gage.--Recording. At site 550 ft upstream at datum 0.7 ft higher Apr. 13, 1922, to Sept. 18, 1930. At sites 330 and 430 ft upstream Sept. 19, 1930, to Aug. 31, 1938. At datum 1.0 ft higher Sept. 19, 1930, to Dec. 19, 1949. Altitude of gage is 5,980 ft (from river-profile map).

Stage-discharge relation. -- Prior to 1927, ratings poorly defined by current-meter measurements below 3,000 cfs; extended on basis of shape of later

ratings.

1927-40: Ratings poorly defined by current-meter measurements below
8,000 cfs: extended to 10,000 cfs on basis of shape of later ratings and extended above by logarithmic plotting.

1941-62: Ratings fairly well defined by current-meter measurements below 10,000 cfs; extended above by logarithmic plotting.

Historical data .-- Maximum known flood occurred Oct. 5, 1911. Another major flood occurred Sept. 5 or 6, 1909.

Remarks.--Records prior to October 1930 collected by State engineer of New Mexico. Diversions for irrigation of about 14,000 acres above station. Floodflows not appreciably affected. Base for partial-duration series, 4,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Apr. 14, 1924 Apr. 22, 1924 May 14, 1924	8.3 7.35 7.55	7,500 6,000 6,400	1930	Apr. 8, 1930 Apr. 25, 1930 May 30, 1930	5.90 5.90 6.00	4,400 4,400 4,500
1925	June 14, 1924 Sept.19, 1925	7.50 6.80	6,300 4,500	1931	May 18, 1931	4.43	3,740
1926	Oct. 6, 1925	6.60	4,300	1932	Apr. 17, 1932 May 20, 1932	6.99 7.19	9,050 9,050
1320	May 6, 1926 June 7, 1926	8.80 7.90	8,000 6,500	ii	June 16, 1932	6.30	6,650
1927	Apr. 5, 1927	8.45	8,000	1933	May 21, 1933 June 2, 1933	5,08 6.31	4,040 6,410
	Apr. 26, 1927 May 16, 1927 June 13, 1927	8.10 7.75 7.10	7,600 6,600 5,600	1934	Sept.24, 1934	5,50	6,380
	June 29, 1927 July 10, 1927 Sept. 9, 1927	13.50 6.15 7.40	25,000 5,500 8,300	1935	Apr. 8, 1935 Apr. 17, 1935 May 21, 1935	5.56 5.25 7.38	6,040 5,240 10,100
	Sept. 13, 1927 Sept. 13, 1927 Sept. 19, 1927	10.70	18,000 7,500		June 16, 1935 Sept.27, 1935	7.42 4.80	10,100 10,400 4,310
1928	May 3, 1928 May 31, 1928	6.35 6.40	5,600 5,700	1936	April 1936 May 6, 1936 Aug. 5, 1936	5.72 6.00 5.28	5,930 6,580 4,900
1929	Mar. 30, 1929 Apr. 5, 1929 May 10, 1929	6.45 10.50 6.98	6,000 17,000	1937	May 18, 1937	6.79	8,230
	July 31, 1929 Aug. 11, 1929 Sept.23, 1929	7.15 9.90 10.30	7,200 7,400 15,000 16,500	1938	Mar. 3, 1938 Apr. 24, 1938 May 16, 1938	5.80 7.02 6.35	5,280 8,430 7,180

Peak stages and discharges of San Juan River at Rosa, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 29, 1938 June 30, 1938	7.50 6.55	9,480 7,180	1949	July 7, 1949 July 11, 1949	4.85 4.57	4,680 4,150
1939	Mar. 24, 1939	5.29	5,670	1950	Apr. 24, 1950	5.19	3,400
1940	May 18, 1940	4.36	3,780	1951	May 28, 1951	6.13	5,250
1941	Apr. 10, 1941 May 13, 1941 June 8, 1941 July 20, 1941 July 22, 1941	4.66 8.26 7.62 5.02 5.14	4,690 16,800 13,200 5,270 5,630	1952	Apr. 8, 1952 Apr. 28, 1952 May 6, 1952 May 15, 1952 June 4, 1952	7.04 6.69 7.46 6.90 7.90	7,940 7,020 9,580 7,630 11,000
1942	Oct. 4, 1941 Oct. 13, 1941 Oct. 25, 1941	5.16 7.62 5.26	5,640 13,800 5,400	1953	May 29, 1953 June 14, 1953	6.22 5.66	5,400 4,200
	Apr. 6, 1942 Apr. 23, 1942	7.18 8.50	11,800 17,200	1954	May 22, 1954	5.29	3,450
	May 27, 1942	6.00	7,650	1955	June 9, 1955	5.78	4,420
1943	Apr. 6, 1943 May 2, 1943 June 30, 1943	4.83 5.17 5.18	4,240 4,820 4,920	1956	May 21, 1956 June 2, 1956	5.71 5.94	4,260 4,900
1944	May 15, 1944 May 24, 1944 June 11, 1944	6.86 6.03 5.77	9,080 7,220 6,720	1957	Apr. 18, 1957 May 11, 1957 June 6, 1957 June 21, 1957 July 27, 1957	5.88 6.30 7.95 7.43 9.45	4,580 5,470 10,300 8,690 16,600
1945	Apr. 10, 1945 Apr. 22, 1945 May 4, 1945 May 28, 1945	4.85 5.58 5.78 5.53	4,420 6,010 6,480 5,560	1958	Aug. 30, 1957 Apr. 20, 1958 May 13, 1958 May 28, 1958	5.54 8.29 6.58 7.16	4,180 12,400 6,800 8,480
1946	June 6, 1946	4.38	3,360		June 7, 1958	6.95	7,850
1947	May 11, 1947 Aug. 22, 1947	5.17 5.30	4,720 5,340	1959	May 15, 1959	4.67	2,700
1948	Apr. 18, 1948 May 1, 1948 May 7, 1948 May 19, 1948	5.55 5.12 5.25 6.52	5,750 4,460 4,790 8,880	1960	Mar. 27, 1960 May 13, 1960 June 5, 1960 June 18, 1960	7.28 5.92 6.09 5.98	8,650 4,920 5,310 5,000
	June 3, 1948	6,60	9,210	1961	May 2, 1961 May 20, 1961	5.49 5.69	4,050 4,560
1949	Apr. 26, 1949 May 12, 1949 May 30, 1949 June 19, 1949	5.70 5.34 5.20 7.14	6,560 5,880 5,500 11,800	1962	Apr. 20, 1962 May 12, 1962 June 7, 1962	6.54 6.29 5.51	6,330 5,730 4,010

3508. Vaqueros Canyon near Gobernador, N. Mex.

Location.--Lat 36°43'20", long 107°16'50" in SW $_{\overline{u}}^1$ sec.17, T.29 N., R.4 W., on left bank about 100 ft east of Highway 17 and 4.2 miles east of Gobernador.

Drainage area. -- 60 sq mi.

Gage .-- Crest-stage gage. Altitude of gage is 6,640 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{1.02\ ft\ and\ two\ indirect\ measurements\ at\ gage\ height}\ 5.43\ and\ 7.88\ ft.$

Remarks .-- There are no known diversions above gage. Only annual peaks are shown.

Peak stages and discharges Gage height Gage Water Discharge Water Discharge Date height Date year (cfs) vear (cfs) (feet) (feet) 1956 August 1956 July 27, 1957 6.20 880 1960 April 1960 5.18 520 1957 7.88 1.02 1,740 1958 1961 16.3 Sept.22, 1961 2.12 58 1959 August 1959 5.43 580 1962 2.07 55 3525. Los Pinos River below Snowslide Canyon, near Weminuche Pass, Colo. (Locally known as Pine River)

Location. --Lat 37°38'20", long 107°20'00", in sec.5, T.39 N., R.4 W., on right bank 100 ft downstream from Snowslide Canyon, 34 miles south of Weminuche Pass, and 7 miles southwest of Rio Grande Reservoir Dam.

Drainage area. -- 25.3 sq mi.

Gage. -- Recording. Altitude of gage is 10,120 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 370 cfs.

Bankfull stage. -- 3 ft.

Remarks.--Raber-Lohr and Fuchs ditches export water to the Rio Grande basin.

Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Only annual peaks are shown.

Peak	stages	and	discharges
		-	

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 29, 1938	3.26	650	1947	June 8, 1947	2.71	312
1939	May 10, 1939	2.32	300	1948	May 19, 1948	-	550
1940	May 13, 1940	2.04	217	1949	June 18, 1949	4.38	626
				1950	May 30, 1950	1.82	137
1941	June 23, 1941	3.98	585	Å.	,		
		ļ		1951	June 7, 1951	1.80	134
1945	June 14, 1945	2.10	190	1952	June 10, 1952	3.70	494
	•			1953	May 31, 1953	2.20	213
1946	June 6, 1946	2.65	370	Ï	, ,		

3535. Los Pinos River near Bayfield, Colo. (Locally known as Pine River)

Location. --Lat 37°23'00", long 107°34'30", in NW1 sec.18, T.36 N., R.6 W., a quarter of a mile downstream from Little Red Creek, 2 miles upstream from Red Creek, and 11 miles north of Bayfield.

Drainage area. -- 270 sq mi (284 sq mi at site used prior to Aug. 17, 1956).

<u>Gage</u>.--Recording. At sites about $2\frac{1}{4}$ miles downstream prior to Aug. 17, 1956. At datum 7,415.58 ft above mean sea level prior to July 9, 1934, and 7,415.08 ft above mean sea level July 9, 1934, to Aug. 17, 1956. Datum of gage is 7,582.54 ft above mean sea level (Bureau of Reclamation bench mark).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below }2,500 \text{ cfs.}$

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Small diversions for irrigation above station. Flow regulated by Vallecito Reservoir since 1940. Records for water years 1928-33 furnished by State engineer of Colorado. Base for partial-duration series, 1,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1928	May 9, 1928 June 1, 1928	3.69 4.48	1,600 2,390	1932	June 14, 1932 Aug. 20, 1932 Aug. 27, 1932	4.70 3.71 4.95	2,340 1,560 2,580
1929	May 10, 1929 May 26, 1929 June 4, 1929 July 31, 1929	4.58 4.84 4.82 5.57	2,290 2,550 2,530	1933	June 2, 1933 June 10, 1933	5.03 4.44	2,620 2,130
	Aug. 11, 1929 Sept.23, 1929	4.87 4.86	3,320 2,580 2,570	1934	Sept.23, 1934	4.08	1,440
1930	May 30, 1930 June 7, 1930	4.35 3.97	2,080 1,760	1935 1936	June 16, 1935 May 5, 1936	6.58 5.40	4,020 2,560
1931	June 1, 1931	3.62	1,470		May 31, 1936	4.50	1,720
1932	May 22, 1932	5.30	2,810	1937	Apr. 27, 1937 May 14, 1937	3.90 5.06	1,540 2,850

Peak stages and discharges of Los Pinos River near Bayfield, Colo .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 24, 1938	4.26	1,700	1949	June 20-25,1949	4.97	2,390
	Apr. 30, 1938 May 16, 1938 May 29, 1938	4.47 4.63 6.01	1,890 2,050 3,370	1950	June 19, 1950	3.98	1,480
	June 13, 1938	4.80	2,310	1951	June 19,22,1951	2.81	588
	June 22, 1938 June 29, 1938	5.27 6.30	2,820 3,960	1952	June 16-18,1952	4.60	2,010
1939	May 11, 1939 May 22, 1939	3.98 3.98	1,410 1,410	1953	June 12, 1953	2.90	645
2040		ŀ		1954	June 16-28,1954	2.83	596
1940	May 17, 1940	3.68	1,110	1955	June 29, July 1,	2.96	675
1941	July 5, 1941	5.00	2,270	1000	1955	2.00	0,0
1942	Apr. 24, 1942	4.93	2,190	1956	June 9, 1956	2.89	631
1943	May 7, 1943	3.79	1,290	1957	July 27, 1957	12.2	13,800
1944	June 17, 1944	4.82	2,240	1958	June 1, 1958	4.20	2,140
1945	June 16, 1945	3.77	1,290	1959	Apr. 3, 1959	4.02	1,970
1946	June 18-July 1, 1946	2.85	600	1960	Mar. 28, 1960	3,90	1,870
1947	May 27, 1947	3.93	1 410	1961	Apr. 3, 1961	4.13	2,070
		3.93	1,410	1962	Apr. 20, 1962	4.49	2,400
1948	June 10, 1948	5.12	2,520				

3540. Los Pinos River at Ignacio, Colo. (Locally known as Pine River)

<u>Location</u>.--Lat 37°07'45", long 107°37'50", in S_2^1 sec.5, T.33 N., R.7 W., on downstream wingwall of left abutment of highway bridge, three-quarters of a mile upstream from Ignacio, 2 miles upstream from Rock Creek, and 6 miles south of Bayfield.

Drainage area. -- 448 sq mi.

Gage.--Recording. At datum 0.18 ft higher prior to Feb. 23, 1930. Datum of gage is 6,468.85 ft above mean sea level, datum of 1929, supplementary adjustment of 1940.

Stage-discharge relation.--1924-26: Ratings poorly defined below 900 cfs; extended on basis of shape of later ratings.

1927-61: Ratings fairly well defined below 3,000 cfs and extended by logarithmic plotting.

Historical data.--Maximum flood known occurred Oct. 5, 1911. Another major flood occurred Oct. 5 or 6, 1909.

Remarks. -- Records prior to October 1930 collected by State engineer of New Mexico. Diversions for irrigation above station. Flow regulated by Vallecito Reservoir after April 1941. Prior floodflows not affected appreciably by the diversions. Base for partial-duration series, 1,000 cfs. Only amuel peaks are shown subsequent to 1939.

	reak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1924	May 18, 1924 June 7, 1924 June 13, 1924	4.85 4.86 4.90	2,200 2,250 2,300	1926	June 1, 1926 June 5, 1926	4.88 5.10	2,260 2,500			
1925	May 21, 1925 May 24, 1925 June 22, 1925 Sept. 1, 1925 Sept. 19, 1925	4.29 4.10 4.80 5.40 5.50	1,500 1,300 2,100 2,850 3,000	1927	Apr. 7, 1927 May 5, 1927 May 18, 1927 June 9, 1927 June 29, 1927 Sept. 9, 1927	3.60 4.92 5.25 4.02 7.10 6.05	1,150 2,600 3,100 1,600 7,000 4,500			
1926	Oct. 6, 1925 May 6, 1926 May 24, 1926	4.85 4.30 4.90	1,900 1,400 2,200	1928	May 2, 1928 May 29, 1928	3.5 3.77	1,400 1,800			

Peak stages and discharges of Los Pinos River at Ignacio, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Apr. 5, 1929 May 10, 1929 May 26, 1929 June 5, 1929	4.85 4.45 4.40 4.40	3,000 2,400 2,300 2,300	1937 1938	May 15, 1937 Apr. 25, 1938 May 1, 1938	4.92 4.30 4.32	2,950 2,020 2,020
	July 31, 1929 Aug. 11, 1929 Sept.23, 1929	4.90 4.90 4.40	3,200 3,200 2,300		May 16, 1938 May 29, 1938 June 13, 1938 June 23, 1938	4.22 5.13 4.26 4.74	1,760 3,390 1,850 2,610
1930	Apr. 25, 1930 May 30, 1930 June 8, 1930	3.47 4.35 3.86	1,050 1,800 1,400		June 29, 1938 Sept.11, 1938	5.39 4.45	3,940 2,130
1931	May 18, 1931	3.73	1,340	1939	May 11, 1939	3.53	1,060
	June 8, 1931 July 4, 1931	3.60 3.49	1,170 1,130	1940	May 17, 1940	3.12	754
1932	Apr. 5, 1932 Apr. 17, 1932 May 19, 1932 May 25, 1932	3.53 4.05 4.98 5.20	1,060 1,610 2,770 3,100	1941 1942 1943 1944 1945	May 4, 1941 Apr. 25, 1942 Apr. 24, 1943 May 19, 1944 June 18, 1945	5.33 4.83 3.58 4.88 3.82	3,860 2,770 1,210 2,140 668
	June 14, 1932 Aug. 20, 1932 Aug. 27, 1932	4.60 3.47 6.19	2,320 1,050 5,570	1946 1947 1948	Aug. 22, 1946 Aug. 22, 1947 June 7, 1948	3.62 4.26 4.92	557 1,190 2,190
1933	June 2, 1933 June 11, 1933	4.71 4.20	2,800 2,040	1949 1950	June 20, 1949 June 19, 1950	4.82 3.24	2,120 458
1934	Sept.24, 1934	3.48	1,120	1951 1952	Aug. 3, 1951 May 6, 1952	2.95 4.94	282
1935	Apr. 19, 1935 May 14, 1935 June 16, 1935	3.48 3.38 5.57	1,160 1,110 4,270	1953 1954 1955	July 17, 1953 June 23, 1954 May 11, 1955	3.89 3.43 3.39	2,040 816 484 484
1936	Apr. 23, 1936 May 6, 1936 May 31, 1936 Aug. 30, 1936	3.90 4.85 3.68 3.44	1,510 2,860 1,240 1,030	1956 1957 1958 1959	Aug. 16, 1956 July 27, 1957 Apr. 28, 1958 Aug. 25, 1959	3.03 6.94 4.45 2.55	248 6,950 2,240 300
1937	Apr. 16, 1937 Apr. 27, 1937 May 5, 1937	4.48 4.13 4.54	2,380 1,880 2,380	1960	Apr. 11, 1960 May 31, 1961	3.75 3.65	1,220

3550. Spring Creek at La Boca, Colo.

<u>Location</u>.--Lat 37°00'50", long 107°35'40", in $S\frac{1}{2}$ sec.15, T.32 N., R.7 W., on right bank in an excavated channel, a quarter of a mile upstream from mouth and a quarter of a mile east of La Boca.

Drainage area. -- 58 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 6,160 ft (from topographic map).

 $\frac{Stage-discharge\ relation}{and\ extended\ above\ by\ logarithmic\ plotting.}$

Remarks. -- Base for partial-duration series, 120 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Aug. 2, 1951 Aug. 5, 1951	2.37 2.36	122 123	1954	June 30, 1954 July 3, 1954 July 23, 1954	2.50 2.57 3.24	140 149 223
1952	Dec. 31, 1951 Mar. 26, 1952 Apr. 28, 1952 June 3, 1952	a4.13 2.66 2.32 2.44	175 128 142		Aug. 21, 1954 Sept.12, 1954 Sept.26, 1954	2.77 2.54 3.25	173 146 238
	Sept.22, 1952	2.42	139	1955	May 10, 1955 June 14, 1955	2.73 2.53	164 138
1953	July 17, 1953 July 19, 1953 July 29, 1953 Aug. 1, 1953	2.73 2.47 2.86 2.76	167 139 186 174		July 25, 1955 Aug. 5, 1955 Aug. 10, 1955 Aug. 21, 1955 Aug. 27, 1955	2.40 3.30 2.88 2.70 2.42	127 240 186 167 133
1954 a Ba	Oct. 20, 1953 ckwater from ice	3.03	204		Aug. 27, 1933	2.42	133

Peak stages and discharges of Spring Creek at La Boca, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	July 3, 1956	2.37	124	1960	Mar. 18, 1960	2.95	229
1957	Feb. 16, 1957 July 19, 1957 July 22, 1957 July 26, 1957 Oct. 13, 1957 Oct. 21, 1957 Feb. 6, 1958	2.97 3.97 2.95 3.60 2.39 2.88 3.24	203 362 197 299 135 194 244	1961	Oct. 16, 1960 Oct. 18, 1960 Mar. 20, 1961 Mar. 29, 1961 Apr. 8, 1961 Aug. 17, 1961 Sept.18, 1961	2.68 3.26 2.43 2.55 2.87 2.65 2.59	183 292 145 158 205 181 180
1959	Sept.13, 1958 Aug. 7, 1959	2.47 3.37	141 318	1962	Oct. 9, 1961 Oct. 31, 1961 Sept.21, 1962	2.67 2.28 2.27	188 134 134

3555. San Juan River near Archuleta, N. Mex.

Location. --Lat 36°48'30", long 107°42'00", in SW_u^1 sec.17, T.30 N., R.8 W., on right bank half a mile upstream from Gobernador Canyon, 1 mile north of Archuleta, and 6.8 miles downstream from Navajo Dam.

Drainage area. -- 3,260 sq mi, approximately.

Gage.--Recording. At site 4.6 miles upstream at datum 50 ft higher prior to Dec. 29, 1959. Altitude of gage is 5,655 ft (from river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs at present site and 12,000 cfs at former site.

Remarks. -- Some regulations by Vallecito Reservoir (capacity, 126,280 acre-ft) on Los Pinos River. Also some effect by involuntary storage above Navajo Dam, under construction in 1962. Diversions above station for irrigation of about 47,000 acres. Peak flows are materially affected by storage and diversion. Base for partial-duration series, 4,700 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Aug. 27, 1955	7.19	6,680	1958	June 7, 1958	7,92	9,300
1956	June 2, 1956	5,97	4,820	1959	May 15, 1959	4.78	2,800
1957	May 11, 1957 June 6, 1957 June 21, 1957 July 20, 1957 July 27, 1957 Aug. 6, 1957 Aug. 30, 1957	6.85 9.04 8.20 6.22 11.00 7.50 6.00	6,500 12,300 9,800 5,240 18,900 8,050 4,820	1960 1961	Oct. 2, 1959 Mar. 27, 1960 Apr. 13, 1960 May 14, 1960 June 18, 1960 May 31, 1961	7.28 7.90 7.38 6.89 7.09 6.76	7,220 7,320 5,940 4,820 5,330 4,620
1958	Apr. 20, 1958 May 13, 1958 May 28, 1958	8.93 7.72 8.06	12,500 8,750 9,600	1962	Apr. 21, 1962 May 11, 1962	8.22 7.58	8,230 6,450

3565. San Juan River near Blanco, N. Mex.

Location. --Lat 36°43'50", long 107°48'50", in NE $_{4}^{1}$ sec.18, T.29 N., R.9 W., on left bank half a mile upstream from highway bridge, 1 mile upstream from Canyon Largo, and $1\frac{1}{2}$ miles east of Blanco.

Drainage area. -- 3,560 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ At datum 1.0 ft higher prior to Dec. 20, 1950. Datum of gage is 5,540 ft above mean sea level (from river-profile map).

Stage-discharge relation.--Ratings fairly well defined by current-meter measurements below 17,000 cfs and extended above by logarithmic plotting.

<u>Historical data.</u>--Maximum stage known, 21 ft, present site and datum, Oct. 5 or 6, 1911. Flood of Sept. 6, 1909, reached a stage of 11 ft, site and datum then in use (discharge probably exceeded that of Aug. 11, 1929). Flood of June 29, 1927, was of about the same magnitude as those of 1909 and 1929.

Remarks.--Records prior to October 1930 collected by State engineer of New Mexico. Diversions for irrigation above station; peak flows not appreciably affected. Base for partial-duration series, 5,000 cfs.

Water year	Date	Gage height	Discharge	Water	Date	Gage height	Discharge
year		(feet)	(cfs)	year	1	(feet)	(cfs)
1928	May 3, 1928 May 31, 1928	5.70 5.90	7,600 8,500	1941	Apr. 2, 1941 May 14, 1941 June 8, 1941	5.23 8.46 7.85	5,480 23,300 17,500
1929	Apr. 5, 1929 Apr. 18, 1929 May 10, 1929	8.10 5.05 6.13	22,000 5,800 10,000	1942	June 24, 1941 Oct. 4, 1941	7.70 6.12	16,200 6,860
	June 5, 1929 July 31, 1929 Aug. 11, 1929	5.92 6.95 8.70	9,200 15,000 25,000		Oct. 14, 1941 Oct. 25, 1941 Apr. 6, 1942	8.27 6.50 7.36	21,600 8,700 14,800
	Sept. 2, 1929 Sept.23, 1929	5.85 7.70	9,000 19,000	1943	Apr. 23, 1942 May 1, 1943	8.17 5.53	21,100 5,920
1930	Apr. 25, 1930 May 30, 1930	5.00 5.35	5,400 6,600	1944	May 16, 1944	6.75	11,800
	July 22, 1930 Aug. 9, 1930	5.00 5.70	5,400 7,500		May 24, 1944 June 11, 1944	6.45 6.15	10,200 8,960
1931	May 18, 1931 Oct. 3, 1931	4.70 4.85	5,010 5,400	1945	Apr. 22, 1945 May 4, 1945 May 28, 1945	5.53 5.63 5.33	6,290 7,010 5,640
	Mar. 20, 1932 Apr. 5, 1932 Apr. 17, 1932	5.11 6.15 6.33	6,300 10,000 10,500	1946	June 6, 1946	4.33	3,360
	May 23, 1932 June 16, 1932 July 30, 1932	6.67 6.05 4.95	12,000 9,380 5,040	1947	May 11, 1947 Aug. 18, 1947 Aug. 22, 1947	5.31 5.35 6.50	5,770 5,910 10,200
	Aug. 21, 1932 Aug. 28, 1932	7.65 5.62	17,500 7,330	1948	Oct. 14, 1947 Apr. 10, 1948	6.20 5.28	8,600 5,500
1933	June 2, 1933	5.88	10,800		Apr. 21, 1948 May 1, 1948	5.98 5.46	8,000 6,200
1934	Oct. 10, 1933 Sept.24, 1934	4.80 5.20	5,570 7,010		May 19, 1948 June 3, 1948	6.50 6.96	9,600 11,700
1935	Apr. 9, 1935 Apr. 19, 1935 May 21, 1935 June 16, 1935 Sept.27, 1935	5.20 5.10 6.47 7.17 7.08	7,010 6,580 14,700 17,300 17,700	1949	Apr. 18, 1949 Apr. 26, 1949 May 11, 1949 May 28, 1949 June 19, 1949 July 11, 1949	5.40 5.91 5.80 5.38 7.30 5.64	6,140 7,520 7,090 6,140 14,000 6,950
1936	Apr. 14, 1936 May 6, 1936 May 21, 1936	5.48 5.91 5.00	7,360 9,100 5,690	1950	Sept. 7, 1950	4.22	3,500
1937	Mar. 18, 1937	5.13	6,040	1951	May 28, 1951	5.95	5,100
	Apr. 16, 1937 May 18, 1937	7.52 6.47	18,000 11,300	1952	Apr. 8, 1952 Apr. 20, 1952 Apr. 29, 1952	7.23 7.07 7.46	8,270 7,960 9,280
1938	Mar. 4, 1938 Apr. 24, 1938 May 16, 1938 May 29, 1938 June 30, 1938	5.60 6.40 6.00 6.88	7,210 10,800 8,870 13,500		May 6, 1952 May 15, 1952 June 4, 1952 July 9, 1952	7.94 7.31 8.10 6.10	10,900 8,590 11,900 5,420
1939	Sept.12, 1938 Mar. 24, 1939	6.47 5.00	11,000 5,110 6,570	1953	May 29, 1953	6.06	5,310
1939	May 18, 1940	5.41 4.87	4,480	1954	July 23, 1954	6.77	7,040

3567.5. Valdez Draw near Bloomfield, N. Mex.

<u>Location</u>.--Lat 36°43', long 107°55', in $NE_{4}^{1}SW_{4}^{1}$ sec.20, T.29 N., R.10 W., upstream from culvert on State Highway 17, 4 miles east of Bloomfield and 4.5 miles west of Blanco.

Drainage area. -- 1.3 sq mi, approximately.

Gage. -- Crest-stage gage. Altitude of gage is 5,480 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below gage height 1.61 ft and extended above on basis of two indirect measurements at gage heights 2.38 and 3.86 ft.

Remarks .-- There are no known diversions above gage. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	July 17, 1956	2.38	76	1960		2.05	38
1957	July 26, 1957	3.86	293	1			
1958	July 1958	2,53	93	1961	-	2.07	40
1959	Aug. 7, 1959	2.93	144	1962	Feb. 10, 1962	1.85	17

3570. San Juan River at Bloomfield, N. Mex.

<u>Location</u>.--Lat 36°42'00", long 107°59'10", in NW $\frac{1}{u}$ sec.27, T.29 N., R.11 W., on downstream end of bridge pier on State Highway 44, three-quarters of a mile south of Bloomfield, 3 miles upstream from Kutz Canyon, and 10 miles downstream from Canyon Largo.

Drainage area. -- 5,410 sq mi, approximately.

 $\underline{\text{Gage}}$.--Recording. At different datum prior to 1956. Altitude of gage is 5,405 ft (from river-profile map).

 $\underline{\text{Stage-discharge relation}}.\text{--Defined by current-meter measurements below} \\ \overline{\text{7,000 cfs}}.$

<u>Historical data</u>.--Flood of Oct. 6, 1911, is greatest known. Another major flood occurred Sept. 6, 1909.

Remarks.--Diversions above station for irrigation of about 52,000 acres, 2,000 acres of which is below station. Citizens ditch bypasses gage on right bank and Hammond Main Canal bypasses gage on left bank; bypass flow not included in record. Base for partial-duration series, 6,000 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	Oct. 6, 1911	12	a80,000	1958	Apr. 19, 1958 May 12, 1958	8.35 7.35	12,900 9,050
1929	Aug. 11, 1929	11,50	-		May 25, 1958 June 7, 1958	7.52 7.43	9,720 8,940
1956	Aug. 1, 1956 Aug. 16, 1956	7.44 7.35	9,820 9,380	1959	Aug. 6, 1959	6.10	4,950
1957	May 11, 1957 June 7, 1957 June 29, 1957	6.20 7.69 7.25	6,860 11,800 10,200	1960	Oct. 2, 1959 Mar. 9, 1960 Mar. 27, 1960	7.25 6.91 7.32	8,900 8,460 7,830
	July 27, 1957 Aug. 5, 1957 Aug. 17, 1957	9.60 7.83 7.05	20,500 9,740 6,740	1961	Aug. 19, 1961 Sept.19, 1961	6.90 6.67	6,180 6,510
	Aug. 30, 1957	7.95	8,920	1962	Apr. 21, 1962	7.11	7,200

a Estimated; annual peak only.

3572. Gallegos Canyon tributary near Nageezi, N. Mex.

Location. --Lat 36°21', long 107°41', in E½ sec.11, T.25 N., P.10 W., on left upstream wingwall of culvert on State Highway 44, 1.1 miles northwest of Huerfano Trading Post, and 12.5 miles northwest of Nageezi.

Drainage area. -- 0.04 sq mi.

Gage .-- Crest-stage gage. Altitude of gage is 6,500 ft (from topographic map).

Stage-discharge relation.--Defined by three indirect measurements at gage heights 1.07, 2.19, and 4.5 ft.

Remarks.--There are no known diversions above gage. Only annual peaks are shown.

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1952	-		41	1958	August 1958	2.36	135				
1953	_	1.07	41	1959	Oct. 25, 1958	4.5	239				
1954	Sept.26, 1954	2.00	126	1960	-	.89	24				
1955	August 1955	1.72	96	11	1		ì				
				1961	-	2.39	136				
1956	Aug. 16, 1956	1.57	81	1962	-	-	0				
1957	July 26, 1957	2.19	134	11			Ì				

3575. Animas River at Howardsville, Colo.

Location. --Lat 37°50'00", long 107°36'00", in sec.12, T.41 N., R.7 W., on right bank 1,000 ft downstream from bridge on State Highway 110, 0.4 mile southwest of Howardsville, and half a mile downstream from Cunningham Creek.

Drainage area. -- 55.9 sq mi.

Gage.--Recording. At datum 1.00 ft higher prior to Aug. 18, 1939. Datum of gage is 9,616,98 ft above mean sea level, adjustment of 1912.

Stage-discharge relation. -- Defined by current-meter measurements below 950 cfs.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--No diversion. Peaks are principally from snowmelt. Base for partialduration series, 700 cfs.

Peak stages and discharges Gage Gage Discharge Water Discharge Water Date height Date height year (cfs) vear (cfs) (feet) (feet) 1936 3.45 May 25, 1936 2.52 838 1947 June 16, 1947 955 June 29, 1947 3.25 815 1937 May 16, 1937 2.57 889 May 21, 1948 June 3, 1948 June 10, 1948 1,140 1948 3.50 1938 June 3, 1938 June 21, 1938 1,050 3.44 2.83 3.50 1,700 3.57 1,200 1939 June 18, 1949 June 4, 1939 1.87 662 1949 4.36 1,980 3.32 3.25 June 27, 1949 July 3, 1949 986 1940 May 31, 1940 3.10 800 930 1941 May 13, 1941 June 22, 1941 3.14 764 1950 June 11, 1950 3.13 764 3.53 1.080 1951 May 27, 1951 June 16, 1951 3.11 799 1942 June 11, 1942 June 18, 1942 1,000 3.46 3.18 862 3.54 1,060 1952 June 10,15,1952 3.91 3.17 1,520 1943 June 1, 1943 3.02 694 July 6, 1952 853 1944 May 28, 1944 June 24, 1944 3.10 710 1953 June 3, 1953 June 12, 1953 740 3.68 1.120 1,630 1945 June 13, 1945 3.43 941 1954 May 19, 1954 2.84 524 1946 June 12, 1946 3.60 1,060 1955 June 8, 1955 3.47 1,050 1947 June 8, 1947 3.68 1,120 1956 May 31, 1956 3.35 909

Peak stages and discharges of Animas River at Howardsville, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	June 5, 1957 June 20, 1957 June 27, 1957	3.68 3.67 4.06	1,140 1,280 1,690	1960	June 3, 1960 June 17, 1960	3.55 3.64	1,010 1,190
1958	Feb. 18, 1958 May 27, 1958	a5.24 3.48	992	1961	May 26, 1961 June 10, 1961	3.30 3.27	826 819
	June 1, 1958 June 6, 1958	3.29 3.60	833 1,130	1962	June 12, 1962 June 20, 1962 June 29, 1962	3.27 3.28 3.24	777 826 7 9 8
1959	June 6, 1959	3.15	840	1			

a Backwater from ice.

3585, Cement Creek near Silverton, Colo.

Location. -- Lat 37°51'20", long 107°40'35", in sec.31, T.42 N., R.7 W., at Yukon mine, 0.2 mile downstream from Porcupine Gulch, 3 miles north of Silverton, and 3.6 miles upstream from mouth.

Drainage area .-- 13.5 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 9,880.28 ft above mean sea level (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 170 cfs and extended to 470 cfs on basis of a slope-area measurement.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Mine diversions upstream are returned to Creek. Flow includes some mine drainage. Diversions do not affect peak flows. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1936	July 18, 1936	4.45	470	1948	May 19, 1948	3.52	356
				l .	June 3, 1948	3.17	258
1937	May 15, 1937	3.46	218	i	June 9, 1948	3.17	258
1947	May 5, 1947 June 7, 1947	3.07 3.18	202 241	1949	June 18, 1949	3,65	395

3590. Mineral Creek near Silverton, Colo.

Location. -- Lat 37°48'50", long 107°41'45", in sec.13, T.41 N., R.8 W., 50 ft from U.S. Highway 550, 300 ft upstream from Bear Creek, and 2 miles west of Silverton.

Drainage area. -- 43.9 sq mi.

 $\frac{\text{Gage.--Recording.}}{1929.}$ Datum of gage is 9,399.04 ft above mean sea level, datum of

Stage-discharge relation .-- Defined by current-meter measurements below 750 cfs.

Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Red Mountain ditch diverts water to Red Mountain Creek in Gunnison River basin. Diversion does not substantially affect maximum flows. Only annual peaks are shown.

Peak stages and discharges of Mineral Creek near Silvertor, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	May 29, 1936	3.27	711	1943	June 22, 1943	3,13	582
1937	May 17, 1937	3.39	765	1944	June 24, 1944	3,60	930
1938	June 29, 1938	4.69	1,700	1945	June 13, 1945	3.16	674
1939	June 4, 1939	2.92	510	l l			
1940	May 31, 1940	3.23	660	1946	June 11, 1946	3.38	798
	1			1947	June 7, 1947	3.40	810
1941	June 23, 1941	3.83	1,060	1948	June 12, 1948	3.55	870
1942	June 11, 1942	3,55	906	1949	June 18, 1949	4.59	1,480

3591. Lime Creek near Silverton, Colo.

Location, --Lat 37°40'00", long 107°45'10", in sec.33, T.40 N., R.8 W., 3 miles downstream from Coal Creek, 4 miles upstream from mouth, and 11 miles southwest of Silverton.

Drainage area. -- 33.9 sq mi.

Gage. -- Recording. Altitude of gage is 9,050 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 1,400 cfs.

Remarks.--No diversions above station. Peaks are primarily from snowmelt.

Base for partial-duration series, 400 cfs.

Peak	stages	and	discharges
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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	June 5, 1957	7.50	1,400	1960	May 12, 1960	6.34	704
	June 20, 1957	6.55	725	11	May 22, 1960	5.89	466
	June 26, 1957	6.52	710	1	June 2, 1960	6.15	590
		1		1	June 17, 1960	5.81	422
1958	May 20, 1958	6.76	958	li	1		l
	May 27, 1958	6.84	1,010	1961	May 2, 1961	5.79	426
	June 5, 1958	6.35	708	1	May 11, 1961	5.80	430
	,		ì	11	May 19, 1961	6.24	644
1959	May 14, 1959	5.96	514	11	May 27, 1961	6.03	535

3595. Animas River above Tacoma, Colo.

Location. --Lat 37°34'10", long 107°46'40", in sec.8, T.38 N., R.8 W., on left bank 0.8 mile upstream from Tank Creek, 2.4 miles downstream from Cascade Creek, and 3.3 miles north of Tacoma.

Drainage area. -- 348 sq mi.

Gage .-- Recording. Altitude of gage is 7,520 ft (from topographic map).

 $\underline{\text{Stage-discharge relation.}}\text{--Defined by current-meter measurements below }5.700 \text{ cfs.}$

Historical data. -- Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.

Remarks.--Most of flow of Cascade Creek and Little Cascade Creek diverted around station for power development. Diversion does not substantially affect peak flows. Peak flows are principally from snowmelt. Base for partial-duration series, 3,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 8, 1946	6.73	5,060	1947	Aug. 22, 1947	6.43	4,460
1947	May 5, 1947 June 9, 1947 June 16, 1947 June 20, 1947	6.11 7.12 6.39 6.04	3,820 5,950 4,380 3,680	1948	May 19, 1948 June 3, 1948 June 9, 1948	7.69 7.11 7.00	6,920 5,880 5,460
	June 28, 1947	6.06	3,720	1949	June 18, 1949	8.86	9,500

Peak stages and discharges of Animas River above Tacoma, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge
1950	May 30, 1950	5.80	3,120	1954	May 21, 1954	5.63	2,800
1951	May 27, 1951	6.65	4,760	1955	June 8, 1955	6.96	5,280
1952	May 14, 1952 June 10, 1952	6.27 8.20	4,100 8,200	1956	May 31, 1956	6.50	4,380
1953	June 12, 1953	7.42	6,300	<u> </u>			

3610. Hermosa Creek near Hermosa, Colo.

<u>Location</u>.--Lat $37^{\circ}25^{\circ}30''$, long $107^{\circ}50^{\circ}20''$, in NW_{4}^{1} sec.3, T.36 N., R.9 W., 20 ft downstream from private bridge, 1 mile northwest of Hermosa, and 2 miles upstream from mouth.

Drainage area. -- 172 sq mi.

Gage.--Recording (nonrecording for short periods) April 1920 to September 1928 at sites within half a mile of present site at different datums; recording at present site since Apr. 9, 1940. Datum of gage is 6,705.88 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1,700 cfs.

Remarks. --Diversions for irrigation of a few acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1920-28 furnished by State engineer of Colorado. Base for partial-duration series, 800 cfs.

Peak stages and discharges Gage Gage Water Discharge Water I scharge Date height Date height vear (cfs) year (cfs) (feet) (feet) 2,790 1920 23, 1920 May 9.0 1948 Apr. 17, 1948 May 19, 1948 2.80 980 3.80 2,160 1921 2, 1921 28, 1921 6.30 1,140 1,500 May June 3. 1948 3.02 1,210 May 7.00 1,160 1949 Apr. 26, 1949 2.95 1922 Apr. 21, 1922 5.65 836 May 2, 1949 15, 1949 3.12 1,170 1,230 May May 5, 1922 6.85 1,440 3.17 May 25, 1922 8, 1922 1,250 6.08 May 28, 1949 3.50 1,620 June 5.47 1.100 June 19, 1949 3.98 2,230 1923 May 20, 1923 5.4 890 1950 Apr. 22, 1950 2.28 428 May 27, 1951 1924 May 19, 1924 5.15 990 1951 588 2.46 1925 May 21, 1925 600 1952 Apr. 28, 1952 2.93 1,010 May 6, 1952 3.56 1,940 1926 May 6, 1926 1,250 June 4, 1952 3.88 2,440 1927 May 18, 1927 5.70 1,240 1953 May 28, 1953 2.40 730 June 28, 1927 Sept.12, 1927 6.50 1,770 2,100 s.50 1954 May 21, 1954 2.13 444 1928 May 9. 1928 650 1955 8, 1955 706 Mav 2.47 1940 13, 1940 475 1956 May 21, 1956 2.37 524 6.02 12, 1941 7, 1957 1941 May 2,980 1957 May 3.00 940 May 26, 1941 Sept.22, 1941 4.09 1,600 1,800 June 5, 1957 4.10 2,210 June 20, 1957 June 26, 1957 4.42 2.75 1,170 985 1942 Oct. 21, 1941 4.18 1,510 Apr. 14, 1942 Apr. 23, 1942 May 11, 1942 May 27, 1942 3.20 870 1958 Apr. 21, 1958 May 7, 1958 1,090 3.30 3.67 1,200 May 3.35 1,230 3.37 1,050 May 22, 1958 4.30 1,790 3.55 27, 1958 6, 1958 1,120 May 4.27 1,770 June 3.13 971 1943 1, 1943 3.23 865 1959 15, 1959 May 1.93 320 1944 May 15, 1944 4.40 2,100 1,570 May 24, 1944 June 10, 1944 3.45 9, 1960 13, 1960 May 1960 2.87 802 Apr. 3.05 1,020 May 3.39 1.100 1945 10, 1945 28, 1945 2.53 813 1961 19, 1961 712 May 2.86 May 2.52 802 1962 Apr. 20, 1962 3.24 954 1946 6, 1946 2.11 June 348 May 9, 1962 3.31 997 May 10, 1947 2.55 755 1947

1939

a About.

May 22, 1939

4.08

2,750

3615. Animas River at Durango, Colo.

Location. -- Lat 37°16'45", long 107°52'25", in sec.20, T.35 N., R.9 W., at plant of Western Colorado Power Co. at Durango, three-quarters of a mile upstream from Lightner Creek.

Drainage area. -- 692 sq mi.

Gage. -- Nonrecording prior to Mar. 2, 1921; recording thereafter. At different datum prior to Aug. 13, 1911. Datum of gage is 6,501.57 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 13,000 cfs.

Bankfull stage .-- 11 ft.

<u>Historical data</u>.--Flood of Oct. 5, 1911, is maximum known. Flood of Sept. 6, 1909, reached a stage of 8.5 ft on gage used 1910-11 (discharge, about 10,000 cfs).

Remarks.--Diversions for irrigation of about 4,000 acres. Some regulation for power above station. Diversions and regulation do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1922 furnished by State engineer of New Mexico; those for 1928-33 furnished by State engineer of Colorado. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges Gage Gage Water Discharge Discharge Water Date height Date height vear (cfs) year (cfs) (feet) (feet) 8.5 1909 Sept. 6, 1909 a10,000 1940 15, 1940 3,170 May 4.43 14, 1941 1912 Oct. 5, 1911 11 25,000 1941 May 7.40 10,500 May 27, 1941 June 8, 1941 June 24, 1941 5.89 6,450 1922 7, 1922 May 5.2 4,800 5.08 May 30, 1922 June 10, 1922 6.15 6.58 6,600 6.51 8,120 7,800 27, 1942 1942 5.30 May 5,300 June 12, 1942 June 19, 1942 1924 June 15, 1924 5.32 4.500 5.35 5,450 5.12 1925 June 22, 1925 5.08 4,100 Sept. 2, 1925 Sept.19, 1925 5.05 4,000 1943 May 3, 1943 4.62 3.940 6.00 6.000 6.04 16, 1944 1944 May 6.990 4,400 24, 1926 6, 1926 5.26 May 30, 1944 June 11, 1944 5.56 5.69 1926 May 5,820 6,130 June 5.57 5,000 June 21, 1944 5.56 5.820 May 1927 18, 1927 5.77 4,000 June 29, 1927 Sept.10, 1927 Sept.13, 1927 9.65 8.20 20,000 1945 May 28, 1945 June 15, 1945 4.61 4,040 14,000 4.77 4,370 7.85 12,500 1946 June 9, 1946 4.84 4,330 1928 June 1, 1928 5.11 4,450 1947 June 10, 1947 Aug. 23, 1947 5.36 5,130 May 26, 1929 June 5, 1929 June 15, 1929 4,950 1929 5.42 5.02 4,330 5.18 4,570 4,010 May 19, 1948 June 4, 1948 7.26 4.83 1948 8,720 6.26 6,750 May 30, 1930 June 13, 1930 1930 4.84 4,020 May 28, 1949 June 19, 1949 4.95 5.60 1949 4,940 8.50 12,700 1931 June 4, 1931 3.68 2,230 1950 4.46 June 1, 1950 3,280 May 23, 1932 May 30, 1932 June 14, 1932 Aug. 28, 1932 5.60 5,270 1932 4,440 4,600 5.11 5.21 1951 May 28, 1951 5.27 4,320 5.00 4,260 1952 May 6, 1952 5.63 5,170 May 15, 1952 5.62 5,140 1933 8,450 June 2, 1933 June 11, 1933 5.50 5,360 11, 1952 6.98 June 4.98 1952 5.05 4,450 July 1934 3.72 1953 5.75 Mav 10, 1934 2,410 June 13, 1953 5,430 1935 June 15, 1935 6.00 6,560 1954 May 21, 1954 5.08 3,090 1936 June 9, 1955 May 6, 1936 4.68 3,890 1955 5.87 4,790 1937 May 18. 1937 5.17 4.970 1956 June 1, 1956 5.56 4,070 1938 June 4, 1938 5.90 6,480 1957 June 6, 1957 8.12 9,360 June 22, 1938 June 30, 1938 June 21, 1957 June 28, 1957 July 27, 1957 7.28 7.30 7.62 6.13 7,120 7,390 7,430 8,160 6.15 7,180

Peak stages and discharges of Animas River at Durango, Colo. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	May 28, 1958	7.53	7,960	1960	June 18, 1960	5.77	4,350
	June 7, 1958	7.32	7,540	1961	May 28, 1961	5.64	4,250
1959	June 7, 1959	5.15	3,140	1301	nay 20, 1501	0,01	1,200
7.000	*			1962	May 10, 1962	5.72	4,280
1960	June 4, 1960	5.98	4,630	1		'	

3620. Lightner Creek near Durango, Colo.

Location.--Lat 37°16'10", long 107°53'15", in sec.30, T.35 N., R.9 W., half a mile upstream from mouth and half a mile west of Durango.

Drainage area. -- 66 sq mi, approximately.

<u>Gage.</u>--Recording. At site $1\frac{1}{2}$ miles upstream at different datum June 18, 1927, to Sept. 30, 1939. At site 50 ft upstream at datum 1.78 ft higher Oct. 1, 1939, to June 18, 1941. Datum of gage is 6,533.95 ft above mean sea level (State Highway Department bench mark).

 $\frac{Stage-discharge\ relation.--Defined\ by\ current-meter\ measurements\ below\ 700\ cfs}{and\ extended\ above\ on\ basis\ of\ slope-area\ measurement\ at\ 1,450\ cfs.}$

Bankfull stage .-- 6 ft.

 $\underline{\text{Remarks.--No}}$ diversion. Peak flows are principally from snowmelt. Base for partial-duration series, 220 cfs.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1928	Mar. 22, 1928	2.00	220	1941	Apr. 9, 1941 May 4, 1941	2.80 5.10	256 1,450			
1929	Apr. 4, 1929	3.25	910		May 25, 1941 Sept.22, 1941	2.70	342 1,330			
1930	Aug. 9, 1930 Aug. 13, 1930	2.8	760	3.040						
	o ,		227	1942	Oct. 3, 1941 Oct. 13, 1941	4.20 5.30	900 1,400			
1931	July 30, 1931	1.45	120		Oct. 21, 1941 Oct. 25, 1941	4.60 5.90	1,100 1,850			
1932	Mar. 19, 1932 Mar. 25, 1932	1.85 1.83	270 261		Apr. 5, 1942	3.93	820			
	Apr. 14, 1932	1.78	239		Apr. 11, 1942 Apr. 22, 1942	3.10 3.90	545 850			
1933	Sept. 9, 1933	2.25	385	1943	Apr. 5, 1943	2.63	219			
1934	Sept.23, 1934	1.90	155	1944	May 14, 1944 July 20, 1944	3.14 4.35	398 980			
1935	Aug. 16, 1935	2.40	370		, ,					
1936	Apr. 12, 1936	2.10	250	1945	Apr. 20, 1945 May 1, 1945	2.90 2.76	285 239			
1937	Apr. 13, 1937	2.48	600	1946	July 18, 1946	3.25	464			
	June 26, 1937 July 5, 1937	5.00 2.40	1,830 450		July 20, 1946 Aug. 12, 1946	5.20 2.85	1,450 235			
	July 29, 1937	2.40	450	1947	Aug. 4, 1947	3.00	297			
1938	Apr. 19, 1938 Sept. 5, 1938	2.23	374	134	Aug. 20, 1947	4.00	786			
		2.32	364		Aug. 29, 1947	2.82	239			
1939	Sept. 8, 1939 Sept.10, 1939	2.80 2.50	590 580	1948	June 1, 1948 Aug. 4, 1948	2.80 2.78	263 254			
1940	Aug. 24, 1940	2.92	322	1949	June 18, 1949	4.18	900			

3629. Florida River near Hermosa, Colo.

Location.--Lat $37\,^{\circ}22\,^{\circ}40$ ", long $107\,^{\circ}39\,^{\circ}40$ ", in NW_{1}^{1} sec.20, T.36 N., R.7 W., on left bank 2 miles upstream from True Creek and 10 miles southeast of Hermosa.

Drainage area. -- 69.4 sq mi.

Gage.--Recording. Altitude of gage is 7,940 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measuremerts below 970 cfs.

Remarks.--Diversions above station for irrigation of 150 acres do not materially affect peak flows. Peaks are principally from snowmelt. Pase for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	May 18, 1956 May 30, 1956	6.30 6.22	57 5 5 4 7	1960	May 13, 1960 May 23, 1960 May 29, 1960	6.33 6.14 6.21	688 603 634
1957	June 5, 1957 June 25, 1957 July 20, 1957	7.58 7.72 6.16	1,240 1,280 534		June 3, 1960 June 16, 1960	6.58 6.30	810 684
	July 26, 1957	8.67	1,880	1961	May 19, 1961	6.61	7 9 0
1958	May 10, 1958 May 26, 1958 June 6, 1958	5.94 7.10 7.72	526 1,030 1,320	1962	May 9, 1962 June 6, 1962	8.79 8.01	800 590
1959	May 29, 1959	6.01	494				

3630. Florida River near Durango, Colo.

 $\frac{\text{Location}}{\text{bank just downstream from Red Creek and 9 miles northeast of Durango.}}$

Drainage area. -- 96 sq mi, approximately.

Gage. -- Nonrecording prior to Mar. 26, 1928, at several sites within 3 miles downstream at different datums; recording thereafter. At site a quarter of a mile downstream at different datum Mar. 26, 1928, to Sept. 9, 1934. Datum of gage is 7,301.88 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 1,500 cfs.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Diversions for irrigation of 160 acres. There may have been greater diversions prior to 1917. Diversions do not substantially affect peak flows. Peaks are principally from snowmelt. Records for 1917-24, 1927-33, furnished by State engineer of Colorado. Base for partial-duration series, 660 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1901	May 20, 1901	4.1	1,160	1922	June 11, 1922	-	1,500
1902	May 4, 1902	2.9	460	1923	June 12, 1923	-	1,300
1903	June 2, 1903	4.1	1,160	1924	June 6, 1924	2.85	900
1911	June 6, 1911	-	1,000	1927	June 28, 1927	4.50	3,200
1917	June 18, 1917	-	1,600	1928	May 31, 1928	3.60	820
1918	May 25, 1918	-	650	1929	May 9, 1929	3.26	604
1919	May 29, 1919	-	1,200		May 26, 1929 June 3, 1929	3.54 3.79	733 855
1920	May 22, 1920	-	1,800		July 31, 1929 Aug. 4, 1929	4.30 3.40	1,070 714
1921	May 16, 1921	-	2,100		Aug. 11, 1929 Aug. 30, 1929	3.30 3.20	668 622

Peak stages and discharges of Florida River near Durango, Colo.--Continued

	TCAR BUAGED and						
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1929	Sept.22, 1929	3.10	577	1945	May 27, 1945	3.40	810
	1				June 7, 1945	2.92	551
1930	May 29, 1930	3.32	680		June 13, 1945	3.55	924
	June 8,12,1930	3.40	720		-		_
	i	1		1946	June 7, 1946	3.51	873
1931	June 6, 1931	3.10	528				
	l	[1947	May 6, 1947	2.82	605
1932	May 25, 1932	3.93	995		June 7, 1947	3.35	855
	May 29, 1932	3.70	880	i	Aug. 22, 1947	3.85	1,210
	June 13, 1932	3.83	945				
	Aug. 27, 1932	5.10	1,700	1948	June 3, 1948	4.15	1,240
1933	June 1, 1933	7 74	004	1	June 11, 1948	3.81	1,040
1933	June 1, 1933 June 10, 1933	3.74 3.75	894 900	1949	Ma 80 3040	7 45	705
	June 19, 1933	3.70	870	1949	May 28, 1949	3.45 3.24	795 673
	July 6, 1933	3.25	639		June 6, 1949 June 19, 1949	5.30	2,080
				1	June 19, 1949	5.30	2,000
1934	May 6, 1934	3.02	512	1950	May 30, 1950	2.88	486
1935	June 15, 1935	4.25	1,440	1951	May 27, 1951	3.71	887
1300	June 20, 1935	4.04	1,290	1331	May 27, 1931	3.71	007
	tune 20, 1500	1,07	1,230	1952	May 6, 1952	3.37	620
1936	May 5, 1936	2.98	728	1002	May 15, 1952	3.67	859
	May 24, 1936	2.70	598		June 3, 1952	4.17	1,280
	,			l	June 9, 1952	4.35	1,380
1937	May 13, 1937	3.17	801		1	- * -	_,
		1		1953	May 28, 1953	3.37	734
1938	Apr. 24, 1938	2.60	557	l l	June 12, 1953	3.51	782
	Apr. 30, 1938	2.59	552		1	1	
	May 16, 1938	2.76	614	1954	May 21, 1954	3.10	555
	May 28, 1938	3.86	1,170		July 23, 1954	3.64	838
	June 22, 1938	3.05	781				
	June 29, 1938	3.43	955	1955	May 29, 1955	3.19	588
	Sept.11, 1938	2.80	614		June 7, 1955	3.69	873
1939	May 10, 1939	2.68	531	1956	May 18, 1956	3.17	588
1940	May 14, 1940	2.75	565	1957	June 5, 1957	4.30	1.340
	,				June 9, 1957	4.00	1,060
1941	May 13, 1941	4.27	1,300		June 25, 1957	4.55	1,410
	June 24, 1941	4.42	1,530		July 26, 1957	5.92	2,750
	Sept.22, 1941	4.35	1,450		1		1
				1958	Apr. 22, 1958	3.41	593
1942	Oct. 13, 1941	2.87	561	il	May 10, 1958	3.57	570
	May 26, 1942	3.74	1,000		May 29, 1958	4.65	1,210
	June 11, 1942	3.75	1,020	ll .	June 6, 1958	4.88	1,390
1943	May 1, 1943	3.12	756		1	l	
	May 25, 1943	3.08	732	1959	May 29, 1959	3.50	505
	June 1, 1943	3.07	726				
1044	Warr 15 1611	7 46	000	1960	May 13, 1960	3.81	645
1944	May 15, 1944	3.49	900		May 29, 1960	3.61	561
	May 24, 1944	3.43	864	1	June 3, 1960	3.98	748
	May 31, 1944	3.47	888]	June 16, 1960	3.71	607
	June 10, 1944	3.84	1,110	L		L	L

3632. Florida River at Bondad, Colo.

Location.--Lat 37°03'20", long 107°52'10", in $S^{\frac{1}{2}}$ sec.31, T.33 N., R.9 W., on left bank 0.6 mile upstream from mouth, 0.7 mile southeast of Bondad, and 15 miles south of Durango.

Drainage area .-- 221 sq mi.

 $\underline{\text{Gage.--Recording.}}$ At site 300 ft upstream at datum 2.39 ft higher prior to Sept. 11, 1958. Altitude of gage is 6,000 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 1,200 cfs.

 $\frac{\text{Remarks.}\text{--}\text{Diversions}}{\text{fect peak flows.}} \text{ for irrigation of about 14,000 acres do not materially affect peak flows.} \\ \text{Base for partial-duration series, 600 cfs.}$

Peak stages and discharges of Florida River at Bondad, Colo.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	June 6, 1957	4.47	1,140	1959	Aug. 25, 1959	4.02	317
	June 21, 1957 July 26, 1957 Aug. 6, 1957	4.26 - 4.93	1,110 (a) 1,200	1960	Mar. 19, 1960	4.87	668
	- ,		· ·	1961	May 22, 1961	4,22	446
1958	May 30, 1958 June 7, 1958	4.12 4.35	1,160 1,430	1962	June 7, 1962	4.22	429
	Sept.12, 1958	5.32	854	1)	i		

a Maximum for year not determined.

3635. Animas River near Cedar Hill, N. Mex.

Location. --Lat 37°02'15", long 107°52'25", in sec.7, T.32 N., R.9 W., on right bank three-quarters of a mile downstream from Florida River, 2.5 miles upstream from Colorado-New Mexico State line, and 8.5 miles north of Cedar Hill.

Drainage area. -- 1,090 sq mi, approximately.

Gage.--Recording. At same site at datums varying from 1.52 to 1.36 ft higher, due to settling of well, Nov. 12, 1933, to Sept. 14, 1937, and at datum 1.36 ft higher Sept. 15, 1937, to Sept. 30, 1946. Altitude of gage is 5,960 ft (from topographic map). Gage heights listed are to datums that were used. Those for water years 1938-46 could be adjusted to present datum by applying +1.36 ft and those for the 4 previous years could be adjusted approximately by applying corrections varying from +1.52 to +1.36 ft.

Stage-discharge relation .-- Defined by current-meter measurements.

Historical data .-- Maximum flood known occurred Oct. 5 or 6, 1911.

Remarks.--Diversions for irrigation of about 20,000 acres; effect on peak discharges negligible. Base for partial-duration series, 3,500 cfs.

reak stages and discharges							
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 20, 1935 June 16, 1935	4.85 7.62	3,500 9,540	1944	May 16, 1944 May 24, 1944 June 11, 1944	6.95 6.41 6.65	7,780 6,220 6,900
1936	May 6, 1936 May 26, 1936 Aug. 30, 1936	5.92 5.37 6.58	5,040 4,190 6,650	1945	May 11, 1945 May 28, 1945 June 15, 1945	5.15 5.58 5.70	3,690 4,550 4,760
1937	Apr. 16, 1937 May 18, 1937 May 29, 1937	5.10 6.40 5.18	3,500 6,410 3,500	1946	June 8, 1946	5.65	4,660
1938	Apr. 25, 1938 May 16, 1938 May 29, 1938 June 14, 1938	5.58 5.60 7.10 6.23	4,500 4,300 7,900 5,370	1947	May 6, 1947 June 9, 1947 June 17, 1947 Aug. 22, 1947	6.70 7.00 6.45 8.00	4,300 4,800 3,710 7,340
	June 22, 1938 June 30, 1938	7.42 7.63	8,160 8,700	1948	May 7, 1948 May 20, 1948 June 4, 1948	6.32 9.60 8.58	3,520 9,100 7,140
1939 1940	May 22, 1939 May 15, 1940	5.13 5.81	3,210 4,020	1949	May 3, 1949 May 16, 1949	6.64 6.71	3,990 4,100
1941	May 4, 1941 May 14, 1941	7.50 9.50	7,800 11,900		May 28, 1949 June 19, 1949	7.41 11.45	5,650 13,100
	May 27, 1941 June 5, 1941	6.97 7.28	6,010 6,890	1950	June 1, 1950	6.62	3,570
	June 24, 1941 Sept.23, 1941	8.30 6.31	9,440 5,440	1951 1952	May 28, 1951 Apr. 28, 1952	7.26 7.15	4,690 4,490
1942	Oct. 3, 1941 Oct. 13, 1941 Oct. 22, 1941 Oct. 25, 1941 May 27, 1942	5.76 6.70 5.75 6.90 6.45	4,180 6,210 4,180 6,650 5,660	1932	May 6, 1952 May 15, 1952 June 11, 1952 July 7, 1952	8.07 8.06 9.65 7.17	6,140 6,240 9,740 4,190
1047	June 12, 1942	6.45	5,660	1953	May 28, 1953 June 13, 1953	7.16 7.77	4,490 5,610
1943	May 1, 1943 June 2, 1943	5.74 5.50	4,460 4,010	1954	May 11, 1954	7.46	5,050

Peak stages and discharges of Animas River near Cedar Hill, N. Mex .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	June 9, 1955 Aug. 7, 1955	7.45 7.10	5,090 4,550	1958	June 7, 1958	9.52	9,200
1956	June 1, 1956	7,37	4,560	1959	June 7, 1959	6.55	3,360
1957	June 6, 1957	10.10	10,800	1960	May 13, 1960 June 4, 1960	7.40	4,800
1551	June 21, 1957 June 29, 1957	9.26 9.15	8,700 8,420		June 18, 1960	7.62 7.40	5,610 5,150
	July 27, 1957 Aug. 6, 1957	10.00	10,600 4,840	1961	May 28, 1961	7.40	4,950
1958	May 10, 1958 May 28, 1958	7.38 9.57	4,820 9,400	1962	May 12, 1962 June 14, 1962	7.31 7.11	4,690 4,230

3645. Animas River at Farmington, N. Mex.

Location.--Lat 36°43'20", long 108°12'00", in $SE_{k}^{\frac{1}{2}}$ sec.16, T.29 N., R.13 W., on left bank at bridge on former State Highway 17, 0.6 mile southeast of Farmington and 1.3 miles upstream from mouth.

Drainage area. -- 1,360 sq mi, approximately.

Gage. --Recording Sept. 17, 1912, to Oct. 4, 1938, at site 0.6 mile downstream at lower datums (datum lowered 2.0 ft Aug. 15, 1927, and raised 0.2 ft Dec. 16, 1929). Gage heights listed are for datums used. Those Aug. 15, 1927, to Dec. 16, 1929, and those for Dec. 16, 1929, to Oct. 4, 1938, could be adjusted to original datum by applying corrections of -2.0 and -1.8 ft, respectively. Recording at present site and datum since Oct. 5, 1933. Altitude of gage is 5,278 ft (from bridge-profile plans).

Stage-discharge relation.--1912-38: Ratings poorly defined by current-meter measurements below 7,500 cfs and extended above by logarithmic plotting.

1939-62: Ratings fairly well defined by current-meter measurements below 10,000 cfs and extended to 12,800 cfs by logarithmic plotting.

Historical data. -- Maximum stage known, 16.5 ft, present site and datum, Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of 11.1 ft, site and datum used in 1904-5 (discharge, about 19,000 cfs).

Remarks.--Records for 1915-30 collected by State engineer for New Mexico. Diversions for irrigation of about 30,000 acres; no appreciable effect on peak discharges. Base for partial-duration series, 4,000 cfs.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1913	May 27, 1913	4.45	4,400	1917	June 18, 1917	5.9	10,000			
1914	Oct. 3, 1913 May 24, 1914 June 2, 1914 June 14, 1914	4.40 5.5 6.40 5.8	4,400 6,900 9,500 7,700	1918	June 11, 1918 June 22, 1918 Sept.11, 1918	4.2 4.0 3.8	5,000 4,500 4,000			
	July 5, 1914 July 14, 1914 July 17, 1914	4.35 4.7 5.6	4,200 4,900 7,200	1919	Apr. 25, 1919 May 18, 1919 May 28, 1919 July 3, 1919	3.85 4.05 4.8 4.0	4,000 4,500 6,500 4,400			
1915	Oct. 4, 1914 Apr. 30, 1915	4.7 5.0	4,900 5,800		July 7, 1919	4.1	4,700			
	May 14, 1915 June 2, 1915 June 13, 1915 June 20, 1915 Sept. 25, 1915	4.5 4.45 4.9 5.1 4.3	4,800 4,600 5,500 6,500 4,400	1920	May 10, 1920 May 22, 1920 June 27, 1920 Aug. 1, 1920	4.8 6.5 5.52 4.1	6,500 11,300 8,500 4,500			
1916	Mar. 23, 1916 May 11, 1916 June 11, 1916 July 10, 1916	4.25 5.0 5.2 4.1	4,400 6,310 6,600 4,000	1921	May 6, 1921 June 5, 1921 June 14, 1921 Aug. 25, 1921	4.35 5.08 6.70 4.00	5,000 6,600 11,000 4,200			
1917	Aug. 2, 1916 Oct. 8, 1916	4.6 5.0	5,200 6,300	1922	May 8, 1922 May 30, 1922 June 10, 1922	4.4 5.3 5.65	6,000 8,600 9,600			
	Oct. 11, 1916 Oct. 14, 1916 May 18, 1917	5.9 5.7 4.4	10,000 9,000 5,000	1924	May 18, 1924 June 14, 1924	4.12 4.3	4,700 5,200			

Peak stages and discharges of Animas River at Farmington, N. Mex.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	May 21, 1925	3.82	4,700	1942	Oct. 3, 1941	5.95	4,500
	May 31, 1925	3.80	4,600	}	Oct. 13, 1941	7.50	8,820 7,900
	June 22, 1925 Sept. 2, 1925	4.18 4.60	5,500 6,600	ļ	Oct. 25, 1941 May 28, 1942	7.30 6.80	5,320
	Sept.20, 1925	5.20	8,000		June 12, 1942	6.85	5,420
1926	May 25, 1926	4.7	6,200	1943	May 4, 1943	6.27	4,280
	June 6, 1926	5.2	7,500	1944	May 16, 1944	7.80	7,540
1927	May 5, 1927	4.2	4,500	1	May 30, 1944	7.40	6,330
	May 19, 1927	5.5	7,300		June 11, 1944	7.50	6,560
	June 29, 1927	8.5	25,000		June 22, 1944	7.3	6,100
	Sept.11, 1927 Sept.18, 1927	8.4 7.0	12,300 9,000	1945	June 15, 1945	6.40	4,540
1928	May 29, 1928	5.65	5,500	1946	June 9, 1946	6.18	4,250
1929	Apr. 5, 1929	5,2	4,000	1947	May 11, 1947	6.08	4,300
	May 26, 1929	6,2	6,100		June 10, 1947	6.60	4,800
	June 7, 1929	6.0	5,400 5,200		Aug. 16, 1947	6.06	4,200 11,200
	Aug. 1, 1929 Aug. 4, 1929	5.9 6.90	8,000	1	Aug. 22, 1947	9.03	11,200
	Aug. 11, 1929	6.8	7,800	1948	May 20, 1948	8.63	9,010
	Sept.22, 1929	6.25	6,000		May 31, 1948	7.44	6,910
1930	Tuno 1 1030		4 700		June 3, 1948	7.80	7,670 7,100
1330	June 1, 1930 July 27, 1930	5.5 5.4	4,700 4,400		June 11, 1948	7.44	7,100
	Aug. 12, 1930	5.4	4,400	1949	May 28, 1949 June 19, 1949	6.60 8.43	5,650 11,200
1931	June 8, 1931	4.13	2,500	1950	June 1, 1950	4.45	3,030
1932	May 19, 1932	6.0	6,200	1500	buile 1, 1550	1.10	0,000
	May 23, 1932	6.4	7,060	1951	May 28, 1951	5.26	4,560
	May 31, 1932	5.6	5,440 6,150	1952	Ann 20 1052	E 70	5,150
	June 15, 1932 June 26, 1932	5.75 5.45	5,310	1332	Apr. 28, 1952 May 6, 1952	5.78 5.82	5,910
	Aug. 21, 1932	5.20	4.100		May 15, 1952	5.69	5,780
	Aug. 28, 1932	6.41	7,530		June 11, 1952	7.21 5.17	9,880 4, 45 0
1933	June 2, 1933	5.99	6,750		July 7, 1952	3.17	4,430
	June 12, 1933	5.30	4,800	1953	May 29, 1953	5.33	4,380
1074	Mo 10 1074	7.07	1 070		June 13, 1953	5.85	5,580
1934	May 10, 1934	3.93	1,830	1954	July 23, 1954	6.70	7,940
1935	June 16, 1935	6.91	9,350	2001	July 25, 1954	5.65	5,080
	June 21, 1935	6.15	7,060			- 43	
	Sept.27, 1935	5.70	6,000	1955	June 9, 1955 Aug. 13, 1955	5.41 5.40	4,660 4,440
1936	May 6, 1936	5.69	5,720			- 10	4 070
	Aug. 4, 1936 Aug. 30, 1936	5.70 6.67	4,800 8,180	1956	June 1, 1956	5.18	4,270
	ı			1957	June 6, 1957	7.15	10,200
1937	May 5, 1937	5.40	4,200		June 29, 1957	6.55	8,540
	May 18, 1937	6.28	6,450	}	July 27, 1957 Aug. 7, 1957	7.03 5.50	10,400 5,140
1938	Apr. 25, 1938	5.30	4,250	Į			-,
	May 16, 1938	5.30	4,150	1958	May 28, 1958	6.90	9,000
	May 29, 1938	7.05 6.1	7,680 5,720	ļ	June 7, 1958	6.80	8,600
	June 14, 1938 June 22, 1938	7.22	7,680	1959	Aug. 9, 1959	4.58	2,560
	June 30, 1938	7.25	8,200	}			
1939	May 22, 1939	4.50	2,930	1960	May 13, 1960 June 4, 1960	5.31 5.60	4,160 5,140
					June 18, 1960	5.49	4,620
1940	May 15, 1940	4.94	3,740	1961	May 28, 1961	5.41	4,280
1941	May 4, 1941 May 14, 1941 Sept.23, 1941	6.85	7,600	3000	Moss 19 1000	E 40	4 950
		8.9	12,800	1962	May 12, 1962	5.40	4,250

3650. San Juan River at Farmington, N. Mex.

Location.--Lat 36°43'25", long 108°13'30", in SE_{4}^{1} sec.17, T.29 N., R.13 W., on left bank 360 ft downstream from highway bridge, 4,000 ft downstream from Animas River, and 1 mile west of Farmington.

Drainage area. -- 7,240 sq mi, approximately.

<u>Gage</u>.--Nonrecording May 11 to Sept. 22, 1906, at site half a mile upstream at different datum. Recording Nov. 1, 1921, to Nov. 18, 1933, at site 360 ft upstream at datum 1.04 ft higher prior to Oct. 1, 1932, and 0.53 ft higher thereafter. Recording at present site since Nov. 19, 1933. Datum of gage is 5,230.37 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Prior to 1927, ratings poorly defined below 9,000 cfs; extended above on basis of shape of later ratings.

1927-62: Ratings fairly well defined below 27,000 cfs and poorly defined to 37,000 cfs. Extensions by logarithmic plotting except for 1927, which was extended above 37,000 cfs by State engineer.

Historical data. -- Maximum flood known occurred Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of about 12.3 ft, site and datum used May to September 1906.

Remarks.--Records prior to October 1930 collected by State engineer of New Mexico. Diversions for irrigation of about 86,000 acres above station; slight effect on peak discharges at times. Base for partial-duration series, 8,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Sept. 6, 1909	12.3	-	1932	Apr. 5, 1932	5.14	11,500
1924	Apr. 9, 1924 Apr. 24, 1924 May 18, 1924 June 14, 1924	5.48 4.95 5.85 5.85	11,500 8,800 14,000 14,000		Apr. 17, 1932 May 23, 1932 June 16, 1932 Aug. 21, 1932 Aug. 28, 1932	5.55 6.06 5.35 5.75 5.75	15,800 18,600 14,900 16,900 16,900
1925	May 21, 1925 June 21, 1925 July 5, 1925 Sept. 2, 1925	5.12 5.28 5.10 5.80	8,200 9,100 8,800 13,000	1933	May 21, 1933 June 2, 1933 June 11, 1933	4.56 5.92 5.35	8,720 16,300 13,000
1926	Sept.20, 1925 May 3, 1926	6.10 5.00	15,000 8,600	1935	May 21, 1935 June 16, 1935 Sept.28, 1935	5.14 6.86 8.00	12,900 22,300 32,800
1927	May 24, 1926 June 7, 1926 Apr. 7, 1927	6.12 6.35 5.35	16,000 18,000	1936	May 7, 1936 May 20, 1936	5.06 4.20	13,500 S,940
1521	Apr. 7, 1927 May 5, 1927 May 18, 1927 June 9, 1927 June 29, 1927	5.35 5.90 6.70 5.35 10.2	11,500 15,000 21,000 11,500 68,000	1937	Apr. 16, 1937 May 18, 1937 June 30, 1937	5.90 5.19 4.15	21,800 16,700 9,980
	Sept.11, 1927 Sept.13, 1927 Sept.18, 1927	6.62 8.50 5.15	21,000 44,000 10,000	1938	Mar. 4, 1938 Apr. 25, 1938 May 16, 1938 May 29, 1938	4.07 4.98 4.62 5.93	8,550 16,300 14,200 21,000
1928	May 3, 1928 May 10, 1928 May 31, 1928	4.35 4.30 4.57	10,000 9,600 12,000		June 23, 1938 June 30, 1938 Sept. 7, 1938	5.45 5.85 4.18	16,300 19,600 10,300
1929	Apr. 5, 1929 Apr. 18, 1929 May 10, 1929	6.50 4.15 5.08	25,000 8,400 15,000	1939	Mar. 24, 1939 May 11, 1939	3.45 3.62	8,300 8,550
	May 26, 1929 June 5, 1929	5.20 5.06	16,000 15,000	1940	May 15, 1940	3.76	7,760
	Aug. 1, 1929 Aug. 11, 1929 Aug. 30, 1929 Sept.23, 1929	5.80 9.00 4.50 6.60	20,000 48,000 11,000 26,000	1941	May 5, 1941 May 13, 1941 May 27, 1941 June 9, 1941 June 25, 1941	6.93 7.38 6.02 6.55 6.81	30,000 32,200 16,400 20,700 22,400
1930	Apr. 25, 1930 May 30, 1930 July 21, 1930	4.45 5.03 5.00	8,000 11,000 11,000	1942	Sept.23, 1941 Oct. 4, 1941	4.91 5.40	8,900
	July 27, 1930 Aug. 9, 1930 Aug. 12, 1930	4.80 5.20 4.75	10,000 10,000 12,400 9,800	1546	Oct. 4, 1941 Oct. 14, 1941 Oct. 26, 1941 Apr. 6, 1942 Apr. 23, 1942	7.40 5.73 5.38 6.50	29,000 15,900 15,500 23,500
1931	June 2, 1931	-	7,760		May 28, 1942	5.28	13,800
1932	Oct. 3, 1931 Mar. 20, 1932	4.75 4.65	8,100 9,000	1943	May 5, 1943	4.85	10,900

Peak stages and discharges of San Juan River at Farmington, N. Mex .-- Continued

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 17, 1944 May 24, 1944 May 31, 1944	5.95 5.66 5.68	17,600 15,100 14,800	1953	May 29, 1953 June 13, 1953	4.79 4.64	9,150 8,650
	June 11, 1944	5.68	14,200	1954	July 23, 1954	4.77	8,380
1945	May 4, 1945 May 28, 1945	4.53 4.60	9,180 8,720	1955	June 9, 1955	4.27	7,730
	June 15, 1945	4.67	9,180	1956	June 3, 1956	4.28	7,910
1946	June 6, 1946	-	7,250	1957	May 8, 1957 June 6, 1957	4.28 6.70	8,100 21,200
1947	May 12, 1947	4.56	9,280]	June 21, 1957	6.13	17,200
101.	June 10, 1947	4.42	8,380		June 29, 1957	6.14	16,400
	Aug. 22, 1947	5.72	15,000		July 27, 1957	7.8	a30,000
	, , , , , , , , , , , , , , , , , , , ,			d	Aug. 7, 1957	5.8	15,600
1948	Oct. 14, 1947	5.52	14,500		Aug. 31, 1957	4.9	10,600
	Apr. 21, 1948	4.54	10,800				
	May 20, 1948	6.04	17,300	1958	Apr. 20, 1958	5.8	16,900
i	June 4, 1948	6.15	17,900	Į.	May 13, 1958	5.21	13,000
3040	Amm 00 3040	4.00	30.000	l	May 28, 1958	6.17	17,000
1949	Apr. 26, 1949 May 3, 1949	4.61 4.63	10,200 9,750	ĮĮ.	June 7, 1958	6.18	17,100
	May 17, 1949	4.66	9,750	1959	May 18, 1959	_	4,390
1	May 30, 1949	4.97	10,800	1333	June 8, 1959	3.92	4,030
	June 19, 1949	7.20	26,900	ll .	June 0, 1305	0.52	
	June 24, 1949	6.82	22,400	1960	Oct. 2, 1959	_	a8.000
	July 9, 1949	5.12	9,430		Mar. 9, 1960	-	a9,500
	, ,		- 1	ll .	Mar. 28, 1960	-	a9,000
1950	June 2, 1950	4.30	6,340	l	Apr. 12, 1960	4.82	8,700
		(Į.	l l	May 14, 1960	4.80	8,750
1951	May 28, 1951	4.54	8,900	ll.	June 5, 1960	4.98	9,750
				ll.	June 18, 1960	4.90	9,250
1952	Apr. 9, 1952	4.39	8,650	1 2002	Mar. 00 1001	4 00	0.000
	Apr. 29, 1952 May 6, 1952	5.2 5.9	12,700	1961	May 28, 1961	4.96	8,080
	May 16, 1952	5.55	16,300 13,900	1962	Apr. 21. 1962	5.34	10,400
	June 11, 1952	6.6	21,000	1302	May 10, 1962	5.19	9,790
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Ш————	1.20 20, 1002	1	0,700

a About.

3655. La Plata River at Hesperus, Colo.

Location.--Lat 37°17'20", long 108°02'05", in sec.14, T.35 N., R.11 W., on right bank at Hesperus 700 ft downstream from U.S. Highway 160.

Drainage area. -- 37 sq mi, approximately.

Gage. -- Nonrecording prior to May 1, 1920; recording thereafter. At several sites about 600 ft downstream at different datums prior to May 25, 1927. At datum 1.00 ft higher May 25, 1927, to Sept. 30, 1941. Datum of gage is 8,104.71 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 790 cfs and extended above on basis of slope-area measurement at 1,880 cfs.

<u>Historical data.--Maximum flood known occurred Oct. 5, 1911; stage and discharge not determined.</u>

Remarks.--Diversions for irrigation of about 2,000 acres along Cherry Creek.
Prior to 1927, station was below La Plata ditch from which about 200 acres
were irrigated. Records for 1917-33 furnished by State engineer of Colorado.
Base for partial-duration series, 230 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1905	June 15, 1905	-	950	1920	May 22, 1920 May 25, 1920	2.75	740 708			
1906	May 7, 1906	-	1,000		May 31, 1920 June 3, 1920	2.65 2.45	682 579			
1917	June 10, 1917	-	1,000		June 26, 1920	1.95	316			
1918	May 18, 1918	-	240	1921	May 5, 1921 May 27, 1921	1.90 2.14	312 401			
1919	Apr. 23, 1919	-	680		May 27, 1921 June 9, 1921	2.60	650			
1920	May 9, 1920	2.50	610		Aug. 22, 1921	1.90	312			

Peak stages and discharges of La Plata River at Hesperus, Colo .-- Continued Gage Gage Water Discharge Lischarge Water height Date height year (cfs) vear (cfs) (feet) (feet) 2.10 1922 5, 1922 30, 1922 Мау 399 1942 11, 1942 27, 1942 1.74 240 May May 2.35 519 May 419 May 25, 1923 Aug. 18, 1923 1923 1,150 1, 1943 29, 1943 3.10 1943 May 2.58 584 1.60 279 May 1.92 260 1924 2.88 Apr. 14, 1924 505 1944 May 15, 1944 3.10 891 8, 1924 19, 1924 4, 1924 May 2.91 23, 1944 2.98 2.87 2.83 700 May 710 May 620 May 29, 1944 686 2.44 10, 1944 20, 1944 June 366 June 646 June 14, 1924 2.30 274 2.31 301 June 1925 20, 1925 3.20 Mav 236 1945 451 May 4. 1945 1.97 Sept. 1, 1925 Sept. 19, 1925 3.56 341 3.83 4, 1946 450 1946 June 1,57 177 3.28 4, 1947 22, 1947 1926 20, 1926 460 1947 362 May May 1.91 June 2, 1926 3.20 422 Aug. 1.97 441 1927 5, 1927 2.6 1.88 494 1948 Apr. Apr. 20, 1948 358 2.00 2.24 2.23 1927 1927 May 17, 28, 3.0 4.5 612 May 7, 1948 393 16, 1948 June 1,400 May 553 7, 1927 9, 1927 21, 1948 Aug. 2.12 231 493 May Sept. 3.60 804 June 2, 1948 2.22 412 Sept.12, 1927 4.10 1,070 1949 Apr. 25, 1949 2.24 285 1928 28, 1928 2.82 40€ 2.60 2.82 May May 3, 1949 421 27, 1949 May 444 9, 1929 14, 1929 1929 May 1.87 353 June 18, 1949 3.15 850 мау 393 1.47 1950 Apr. 21, 1950 2.64 256 May 29, 1930 Aug. 12, 1930 1.02 1930 231 1951 1.07 231 May 27, 1951 2.80 520 2.73 2.64 2.98 1931 May 17, 1931 .93 154 1952 Apr. 18, 1952 311 28, 1952 341 Apr. Apr. 14, 1932 May 19, 1932 1932 1.19 305 May 5, 1952 547 1.66 581 May 1952 3.54 May 19, 1952 May 21, 1932 Aug. 27, 1932 May 3, 1.68 622 June 1952 4.10 950 1.78 650 1953 Apr. 26, 1953 May 24, 1953 2.34 237 1933 1.08 Мау 20, 1933 282 2.45 262 May 27, 1933 June 19, 1933 28, 1.34 422 May 1953 286 1.06 234 1954 July 23, 1954 2.73 283 .75 1934 Apr. 12,26,1934 119 1955 7, 1955 2.48 207 June 1935 1.87 June 15, 1935 549 1956 May 7, 1956 2,51 207 1936 Apr. 13, 1936 1.90 315 7, 1957 5, 1957 Apr. 29, 1936 May 5, 1936 1.55 2.25 254 256 1957 May 2.70 402 June 3.86 946 16, June 21, 1957 May 1936 2.03 257 3,40 584 3.90 July 26, 1957 1.140 1937 Apr. 16, 1937 May 16, 1937 2.23 330 2.94 592 1958 2.72 389 Mav 10, 1958 May 20, 1958 3.28 577 27, 1958 7, 1958 1938 2.86 606 652 Apr. 1938 May 29, 1938 14, 1938 Apr. 2.55 417 June 3.22 380 Мау 2.67 489 May 30, 1938 2.92 658 1959 May 15, 1959 1.90 152 June 29, 2.80 555 1938 1960 9, 1960 349 Apr. 2.46 22, 1960 13, 1960 1960 9. 1939 1.66 206 2.27 1939 May 289 Apr. May 2.63 429 1940 Мау 15, 1940 1.80 250 May 2.11 251 June 3, 1960 2.19 266 5, 1941 2.03 723 1941 May 13, 1941 May 972 1961 2, 1961 2.36 347 Mav 12, 1961 19, 1961 June 4, 1941 1,53 442 May 2.08 240 June 18, 1941 2,15 823 May 2,24 322 Sept.22, 1941 3.30 1,880 1962 Apr. 19, 1962 2.30 322 1942 Oct. 13, 1941 Apr. 22, 1942 2.35 505 9, 1962 2.25 May 328 1.85 271

3660. Cherry Creek near Red Mesa, Colo.

Location. -- Lat 37°07'10", long 108°11'50", in sec.7, T.33 N., R.12 W., 1,300 ft upstream from mouth and 2 miles northwest of Red Mesa.

Drainage area. -- 66 sq mi, approximately.

 $\frac{\text{Gage.--Recording.}}{700 \text{ ft downstream Mar. 15, 1933, and at site}} \\ \frac{700 \text{ ft downstream Mar. 15, 1933, to May 13, 1941; both at different datums.}}{\text{Datum of gage is 6,466.47 ft above mean sea level, adjustment of 1912.}}$

Stage-discharge relation.--Defined by current-meter measurements below 250 cfs and extended above on basis of slope-area measurement at 803 cfs.

Remarks.--Diversions for irrigation of about 2,500 acres; also water is imported from La Flata River for irrigation. Diversions substantially affect peak flows. Records for 1928-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Peak stages and discharges

Water	Date	Gage height	Discharge (cfs)	Water	Date	Gage height	Discharge (cfs)
		(feet)		3		(feet)	(015)
1928 1929	Mar. 27, 1928 Apr. 5, 1929	2.38	118 750	1940	Aug. 25, 1940	5.90	1,480
1930	Aug. 9, 1930	6.50	1,250	1941	May 4, 1941	3.40	377
1931	A			1942	Oct. 25, 1941	4.95	690
	Aug. 17, 1931	2.00	95	1943	May 4, 1943	2.80	93
1932	Apr. 14, 1932	3,55	130	1944	May 16, 1944	3.10	134
1933	July 7, 1933	2.90	190	1945	July 31, 1945	4.80	605
1934	Aug. 26, 1934	4.50	803				
1935	Apr. 15, 1935	2.20	82	1946	Aug. 27, 1946	3.10	90
				1947	May 13, 1947	3.10	98
1936	Apr. 14, 1936	2.80	150	1948	Apr. 16, 1948	3.00	106
1937	Apr. 15, 1937	3.95	608	1949	June 19, 1949	3.00	106
1938	Sept. 3. 1938	3.20	407	1950	Sept.19, 1950	4.15	348
1939	Mar. 21, 1939	1.82	116		2.71.23, 2000	0	3.0

3665. La Plata River at Colorado-New Mexico State line

Location. --Lat 37°00'00", long 108°11'20", in sec.10, T.32 N., R.13 W., at Colorado-New Mexico State line and 3 miles north of Pendleton, New Mexico.

Drainage area . -- 331 sq mi.

Gage.--Recording. At datum 1.26 ft higher May 1, 1920, to Sept. 30, 1924. At
datum 0.26 ft higher Oct. 1, 1924, to Mar. 16, 1934. Datum of gage is
5,975.15 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 750 cfs and extended above on basis of slope-area measurement at 4,750 cfs.

Bankfull stage .-- 8 ft.

Remarks.--Diversions for irrigation of about 15,000 acres substantially affect peak flows. Records for 1920-33 furnished by State engineer of Colorado. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	Aug. 1, 1920	3.95	1,300	1932 1933	Aug. 25, 1932 June 22, 1933	4.45 5.08	800 1,000
1921	Aug. 24, 1921	3.50	850	1934	Aug. 26, 1934	10.8	4,390
1922	May 6, 1922	2.55	470	1935	June 15, 1935	2.62	321
1923	Aug. 18, 1923	3.20	620		,		
1924	Apr. 10, 1924	3.20	780	1936	Aug. 30, 1936	6.60	1,850
1925	Aug. 8, 1925	4.60	750	1937	July 29, 1937	6.60	1,830
				1938	Sept. 3, 1938	3.10	512
1926	May 6, 1926	4.20	640	1939	Sept.10, 1939	4.05	792
1927	Aug. 24, 1927	11.05	4,750	1940	Aug. 24, 1940	5.83	1,460
1928	Mar. 27, 1928	2,95	210				-
1929	Aug. 6, 1929	7.50	2,300	1941	May 4, 1941	5.54	1,360
1930	Aug. 9, 1930	10.70	4,460	1942	Oct. 25, 1941	6.78	1,960
	_			1943	Apr. 24, 1943	2.60	312
1931	Aug. 21, 1931	3.55	430	1944	May 16, 1944	3.54	558

Peak stages and discharges of La Plata River at Colorado-New Mexico State line--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	July 31, 1945	3.50	500	1954 1955	July 8, 1954 July 27, 1955	3.20 9.30	350 3,200
1946	July 29, 1946	4.75	1,010	1)		1
1947	Aug. 22, 1947	5.65	1,430	1956	July 19, 1956	2.00	160
1948	June 11, 1948	3.65	538	1957	July 26, 1957	4.58	858
1949	June 19, 1949	5.46	1,030	1958	Apr. 22, 1958	4.20	732
1950	Sept.19, 1950	9.00	2,980	1959	Aug. 5, 1959	6.00	1,430
		1	· ·	1960	Mar. 27, 1960	3.39	413
1951	Sept.30, 1951	2.40	211	l			
1952	June 3, 1952	4.50	830	1961	Apr. 16, 1961	3.90	622
1953	July 29, 1953	6.10	1,480	1962	Apr. 16, 1962	2.67	284

3670. La Plata River at La Plata, N. Mex.

Location. --Lat 36°56', long 108°11', in sec.3, T.31 N., R.13 W., on right bank 100 ft downstream from highway bridge, 1,900 ft southeast of La Plata, and 15 miles upstream from mouth.

Drainage area .-- 351 sq mi.

Gage. -- Recording. Altitude of gage is 5,670 ft (from topographic map).

Stage-discharge relation.--Poorly defined by current-meter measurements below 370 cfs and extended to 5,500 cfs by logarithmic plotting.

Historical data. -- Major floods occurred on Oct. 6, 1904, Sept. 5, 1909 (stage 7.65_ft, site and datum then in use), and Oct. 5 or 6, 1911. Maximum discharge for floods of 1904 and 1909 were determined as 8,000 and 7,000 cfs, respectively, by Kutter's formula.

Records very poor owing to undefined high-water ratings. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1929	Mar. 5, 1929 Apr. 5, 1929	6.15 4.15	1,700 520	1933	June 22, 1933	4.31	5 9 8			
	July 27, 1929	7.90	3,650	1934	July 26, 1934	4.9	670			
	July 30, 1929	6.5	2,000		Aug. 26, 1934	8.67	4,920			
	Aug. 5, 1929	6.5	2,000							
100-	1			1936	Aug. 2, 1936	4.65	640			
1930	Aug. 9, 1930	8.88	5,500	}	Aug. 6, 1936	4.80	670			
1931	July 30, 1931	4.82	825	ļ	Aug. 30, 1936	7.07	2,580			
				1937	Apr. 16, 1937	5.24	870			
1932	Aug. 25, 1932	-	430	l	July 29, 1937	5.12	760			

3678.6. Chusca Wash near Mexican Springs, N. Mex.

 $\underline{Location}$.--Lat 35°48'40", long 108°50'50", 1.8 miles northwest of Mexican Springs and about 20 miles north of Gallup.

Drainage area. -- 8.7 sq mi, approximately.

Gage. -- Crest-stage gage. Altitude of gage is 6,520 ft (from topographic map).

Stage-discharge relation.--Defined by three indirect measurements at gage heights $1.87,\ 3.78$, and 4.76 ft.

Remarks.--There are no known diversions above gage. Only annual peaks are shown.

1954

Gage Gage Discharge Discharge Water Water Date height Date height vear (cfs) year (cfs) (feet) (feet) Aug. 18, 1955 1937 Sept. 2, 1937 al,100 al,100 1955 2.94 790 1938 Aug. 16, 1956 July 21, 1957 1956 3.04 840 1940 Sept.21, 1940 a325 1957 4.76 2,370 1958 1.28 165 1941 Aug. 6, 1941 al,250 1959 3.98 1,540 1942 1960 2.00 385 a0 2,900 1953 1961 Aug. 24, 1961 4.79 5.28 4,400

1,260

Peak stages and discharges of Chusca Wash near Mexican Springs, N. Mex.

a From Soil Conservation Service records.

3.78

3678.8. Catron Wash near Mexican Springs, N. Mex.

1962

Sept.25, 1962

1.57

242

Location. -- Lat 35°46'15", long 108°49'40", 1.5 miles south of Mexican Springs and 18 miles north of Gallup.

Drainage area. -- 26.9 sq mi.

July 22, 1954

Gage .-- Crest-stage gage. Altitude of gage is 6,310 ft (from topographic map).

Stage-discharge relation.--Defined by two current-meter measurements below gage height 1.28 ft and extended above on basis of three indirect measurements at gage heights 3.19, 4.82, and 5.25 ft.

Remarks .-- There are no known diversions above gage. Only annual peaks are shown.

			Peak stages and discharges					
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1937	Aug. 30, 1937		al,730	1956	Aug. 16, 1956	4.18	1,960	
1938	Sept.10, 1938	-	al,660	1957	July 21, 1957	3.19	1,080	
1939	Aug. 26, 1939	-	a4,710	1958	Aug. 19, 1958	4.82	2,590	
1940	Sept.29, 1940	-	a702	1959	August 1959	4.74	2,500	
		1	ŀ	1960	August 1960	1.24	61	
1942	-) -	a0]]]			
	i		_	1961	Aug. 24, 1961	5.25	3,900	
1954	Sept.11, 1954	3.36	1,250	1962	Sept.25, 1962	3.02	960	

a From Soil Conservation Service records.

3680. San Juan River at Shiprock, N. Mex.

<u>Location</u>.--Lat 37°47'35", long 108°43'55", in $SW_{\overline{u}}^1$ sec.22, T.30 N., R.18 W., on left bank 3 miles west of Shiprock and 6 miles downstream from Chaco River.

Drainage area. -- 12,900 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 7, 1922; recording thereafter. At site 3 miles upstream at different datum prior to Oct. 26, 1933. At datum 3.31 ft higher Oct. 26, 1933, to Sept. 30, 1936, and at datum 1.77 ft higher Oct. 1, 1936, to Sept. 30, 1952. Datum of gage is 4,848.68 ft above mean sea level (river-profile survey).

Stage-discharge relation. -- Poorly defined. Extended by logarithmic plotting.

<u>Historical data.--Maximum stage known</u>, about 22 ft, site and datum then in use, Oct. 6, 1911.

Remarks. -- Records prior to October 1930 collected by the State engineer of New Mexico. Diversions for irrigation of about 118,000 acres; effect on peak discharges negligible. Base for partial-duration series, 8,500 cfs.

Peak stages and discharges of San Juan River at Shiprock, N. Mex.

	Peak stages		narges of San	ı Juan Ri	ver at Shiprock,		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Fischarge (cfs)
1912	Oct. 6, 1911	22	-	1942	Apr. 24, 1942 May 28, 1942	8.90 7.83	26,900 16,200
1928 .	May 3, 1928 May 10, 1928 May 31, 1928	2.32 2.35 2.60	10,500 11,000 13,000	1943	May 5, 1943	6.90	10,700
1929	Apr. 5, 1929 May 10, 1929 May 27, 1929 June 6, 1929	3.7 2.6 3.55 3.38	30,000 12,000 22,000 18,000	1944	May 17, 1944 May 25, 1944 May 31, 1944 June 12, 1944	8.36 7.77 7.70 7.62	18,500 15,400 14,900 14,300
	July 26, 1929 Aug. 1, 1929 Aug. 11, 1929 Sept.23, 1929	3.2 3.3 5.7 4.82	20,000 20,000 80,000 50,000	1945	May 5, 1945 May 29, 1945 June 17, 1945	6.51 6.47 6.42	8,920 8,720 8,920
1930	June 1, 1930	3.8	9,200	1946	Aug. 12, 1946	5.48	10,300
	June 14, 1930 July 28, 1930 Aug. 11, 1930	3.6 4.7 5.0	9,000 13,000 16,000	1947	May 11, 1947 June 9, 1947 Aug. 17, 1947 Aug. 22, 1947	5.30 4.45 5.80 8.40	12,800 8,750 14,800 29,300
1931	July 3, 1931 Aug. 1, 1931	3.4 3.8	9,400 11,700	1948	Oct. 14, 1947	8.52 5.10	30,000 11,200
1932	Mar. 2, 1932 Apr. 18, 1932 May 23, 1932 June 17, 1932	3.40 4.4 5.5 4.0	8,800 15,000 18,000 12,000		Apr. 22, 1948 May 20, 1948 June 4, 1948 June 7, 1948	6.65 6.90 7.64	11,200 18,600 19,800 23,900
1933	Aug. 20, 1932 Aug. 28, 1932 May 21, 1933	4.6 5.2 4.4	15,000 17,000 9,900	1949	Apr. 27, 1949 May 17, 1949 May 29, 1949 June 20, 1949	5.22 5.15 5.31 8.81	10,900 10,300 11,400 28,900
	June 13, 1933 July 7, 1933	4.9 4.5	13,000 9,900		July 10, 1949	5.01	10,900
	Sept.10, 1933 Sept.13, 1933	7.4 4.9	23,300 8,700	1950 1951	Sept.20, 1950 May 29, 1951	4.08 4.55	6,500
1934	Sept.25, 1934	-	6,500	1	May 29, 1951 Apr. 8, 1952		9,300
1935	Apr. 20, 1935 May 21, 1935 June 17, 1935 June 22, 1935 Sept.25, 1935 Sept.28, 1935	3.15 3.86 5.50 4.65 5.20 7.9	9,320 14,400 27,400 19,900 23,600 44,200	1952	Apr. 21, 1952 Apr. 29, 1952 May 7, 1952 May 16, 1952 June 12, 1952	4.89 4.90 5.57 6.68 5.95 7.67	9,960 10,500 13,300 17,000 14,500 20,900
1936	Apr. 13, 1936 May 6, 1936	4.59 4.84	13,800 15,200	1953	May 29, 1953 June 14, 1953	6.23 6.27	9,600 9,900
	May 18, 1936 Aug. 7, 1936 Aug. 29, 1936	3.95 4.25 4.51	10,600 11,500 13,100	1954	July 23, 1954 Sept.26, 1954	6.92 6.30	12,700 11,500
1937	Mar. 18, 1937	5.87		1955	June 10, 1955	5.96	8,640
	Apr. 16, 1937	7.98 7.59	10,400 17,900 15,900	1956	June 4, 1956	5.84	8,420
1938	Mar. 4, 1938 Apr. 24, 1938 Apr. 24, 1938 May 1, 1938 May 17, 1938 May 30, 1938 June 14, 1938	5.80 7.58 6.17 7.20 7.0 6.90 8.27 6.52	10,400 17,500 10,900 15,100 14,700 14,700 20,900 12,700	1957	May 9, 1957 May 12, 1957 June 7, 1957 June 22, 1957 June 30, 1957 July 28, 1957 Aug. 6, 1957 Aug. 25, 1957 Aug. 31, 1957	6.15 6.22 8.95 8.00 7.88 10.45 7.76 6.25 6.50	8,730 8,980 23,200 17,700 16,800 30,900 16,400 9,240 10,500
	June 23, 1938 June 30, 1938 Sept. 3, 1938 Sept. 8, 1938	7.24 7.60 6.45 6.50	16,800 18,000 12,700 12,700	1958	Apr. 20, 1958 May 13, 1958 May 29, 1958 June 8, 1958	7.56 6.87 8.15 7.83	16,100 13,100 19,500 17,800
1939	Sept.11, 1939	6.85	12,100	1959	June 7, 1959	5.44	_
1940	May 16, 1940	5.60	7,430		Aug. 7, 1959	-	4,340
1941	May 5, 1941 May 14, 1941 June 9, 1941 June 25, 1941 Aug. 10, 1941 Sept.23, 1941 Sept.30, 1941	9.7 10.02 8.70 8.85 6.60 7.65 6.60	30,100 32,400 23,100 23,700 13,500 18,700 10,800	1960	Oct. 2, 1959 Mar. 9, 1960 Mar. 28, 1960 Apr. 13, 1960 May 14, 1960 June 5, 1960 June 19, 1960	6.07 5.89 5.80 5.68 5.76 6.05 5.85	9,540 9,290 9,290 8,750 8,540 9,750 9,170
1942	Oct. 4, 1941 Oct. 14, 1941	8.10 10.30	17,300 40,500	1961	June 2, 1961	5.70	8,240
	Apr. 6, 1942 Apr. 13, 1942	7.27	15,800 14,800	1962	Apr. 21, 1962 May 13, 1962	6.16 6.06	10,000 9,670

3685. West Mancos River near Mancos, Colo.

Location.--Lat 37°22'30", long 108°15'20", in sec.14, T.36 N., R.13 W., $\frac{1}{2}$ miles upstream from confluence with East Mancos River and $3\frac{1}{2}$ miles northeast of Mancos.

Drainage area .-- 42.1 sq mi.

Gage.--Recording. At datum 0.66 ft lower Apr. 26, 1938, to Sept. 30, 1944.

Altitude of gage is 7,450 ft (from nearby Bureau of Reclamation level line).

Stage-discharge relation. -- Defined by current-meter measurements below 350 cfs.

Remarks.--Diversions for irrigation of about 2,500 acres. Regulation for irrigation by Jackson Gulch Reservoir (capacity, 10,000 acre-ft) since March 1949. Diversions and regulation substantially affect peak flows. Peak flows are principally from snowmelt. Only annual peaks are shown.

Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1938	June 29, 1938	2.93	380	1946	Apr. 23, 1946	1.71	149			
1939	May 1, 1939	1.99	133	1947	May 9, 1947	2.07	266			
1940	May 17, 1940	2.49	247	1948	June 2, 1948	2.15	269			
	1			1949	June 18, 1949	3.35	674			
1941	May 13, 1941	4.55	1,080	1950	May 31, 1950	2.34	166			
1942	Oct. 13, 1941	3.50	633		}					
1943	May 4, 1943	3.46	429	1951	June 19, 1951	2.12	119			
1944	May 15, 1944	4.00	862	1952	June 6, 1952	3.20	575			
1945	May 3, 1945	2.40	365	1953	June 16, 1953	1.86	115			

3690. East Mancos River near Mancos, Colo.

Location.--Lat 37°22'10", long 108°13'35", in NE $\frac{1}{6}$ sec.24, T.36 N., R.13 W., 800 ft upstream from Middle Mancos River and 4 miles northe st of Mancos.

Drainage area. -- 11.1 sq mi.

Gage.--Nonrecording at site 650 ft downstream at different datum prior to Apr. 27, 1938; recording thereafter. Altitude of gage is 7,450 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 130 cfs.

Bankfull stage . -- 5 ft.

Remarks.--Diversions for irrigation of 380 acres do not substantially affect peak flows. Peaks are principally from snowmelt. Records for April to December 1937 furnished by Bureau of Reclamation. Base for partial-duration series, 60 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height. Date height year (cfs) (cfs) year (feet) (feet) 1937 2S, 1944 9, 1944 May 15, 1937 125 1944 May 1.31 126 1.27 1938 Apr. 28, 1938 June 29, 1938 June 108 1.46 145 1.05 65 3, 1945 12, 1945 18, 1945 27, 1945 1.20 1945 May 95 1939 May 9, 1939 1.00 50 May May 1.18 89 1.07 Apr. 20, 1940 May 15, 1940 1940 1.20 79 May 1.16 84 1.23 90 1946 Apr. 24, 1946 1.01 49 1941 May 4, 1941 2.16 414 2.67 1.37 May s, 1941 642 1947 May 5, 1947 1.08 70 May 24, 1941 June 3, 1941 June 18, 1941 135 1.25 121 1948 Apr. 17, 1948 1.18 68 Apr. 21, 1948 May 6, 1948 May 16, 1948 156 1.22 76 107 1942 Oct. 13, 1941 84 Мау 1.26 1.27 103 Apr. 15, 1942 1.07 62 Apr. 23, 1942 1.11 67 1949 Apr. 26, 1949 1.11 74 May 3, 1949 May 16, 1949 May 28, 1949 June 19, 1949 12, 1942 Mav 1.14 72 1.14 7S May 23, 1942 1.32 111 1.16 86 1.46 142 1943 Мау 3, 1943 29, 1943 1.38 111 1.65 195 May 1,11 60 Apr. 22, 1950 1950 1 04 64 1944 Mav 15, 1944 1.37 1951 128 1.27 May 28, 1951 102 3695. Middle Mancos near Mancos, Colo.

Location.--Lat 37°22'15", long 108°13'55", in SE_u^1 sec.13, T.36 N., R.13 W., 1,300 ft upstream from mouth and 4 miles northeast of Mancos.

Drainage area. -- 13.7 sq mi.

<u>Gage</u>.--Nonrecording at site 1,100 ft downstream at different datum prior to Apr. 27, 1938; recording thereafter. At site 800 ft downstream at different datum Apr. 27, 1938, to Oct. 24, 1941. Altitude of gage is 7,450 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 130 cfs.

Bankfull stage .-- 4 ft.

Remarks. -- Diversions for irrigation of 2,520 acres substantially affect peak flows. Peaks are principally from snowmelt. Records prior to March 1938 furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 4, 1937	5,15	165	1945	May 3, 1945	2,14	156
1938	May 27, 1938	2.64	131	ì		1	_
1939	Apr. 22, 1939	1.91	33	1946	Apr. 23, 1946	1.26	31
1940	May 4, 1940	2.12	4.7	1947	May 13, 1947	1.59	75
				1948	Apr. 16, 1948	1.93	117
1941	May 14, 1941	4.08	233	1949	June 18, 1949	2.85	295
1942	Apr. 22, 1942	2.12	127	1950	Apr. 22, 1950	1.55	61
1943	May 4, 1943	2.52	151		-		
1944	May 15, 1944	2.38	297	1951	May 26, 1951	1.35	37

3700. Mancos River near Mancos, Colo.

<u>Location</u>.--Lat $37\,^{\circ}22\,^{\circ}$, long $108\,^{\circ}15\,^{\circ}$, in SW_{π}^{1} sec.23, T.36 N., R.13 W., just downstream from confluence of West Mancos and East Mancos Rivers and 2 miles east of Mancos.

Drainage area. -- 73 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 7,140 ft.

Stage-discharge relation. -- Defined by current-meter measurements below 510 cfs.

Remarks.--Diversions for irrigation of 5,510 acres substantially affect peak flows. Peaks are principally from snowmelt. Records for 1921, 1931-33, furnished by State engineer of Colorado. Only annual peaks are shown.

					•		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 15, 1932	3.72	502	1936 1937	May 5, 1936 May 4, 1937	3.00 3.45	506 892
1934 1935	Sept.23, 1934 June 7, 1935	2.50 3.10	127 404	1938	June 29, 1938	3.43	662

3710. Mancos River near Towaoc, Colo.

<u>Location</u>.--Lat 37°02', long 108°43', in NW $_{\overline{u}}^1$ sec.18, T.32 N., F.17 W., on left bank 750 ft upstream from bridge on U.S. Highway 666, 6 miles upstream from Aztec Creek, and 12 miles south of Towacc.

Drainage area. -- 550 sq mi, approximately.

<u>Gage.</u>--Nonrecording or recording prior to Mar. 15, 1940, at site $2\frac{1}{2}$ miles downstream at different datum; recording thereafter. Mar. 15, 1940, to Oct. 12, 1941, and Feb. 16, 1951, to Mar. 10, 1954, at site 600 ft downstream at datum 4.95 ft lower. Oct. 13, 1941, to Sept. 30, 1943, and since Mar. 11, 1954, at present site and datum. Datum of gage is 5,055.9f ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 860 cfs and extended above on basis of slope-area measurement at 5,300 cfs.

Remarks.--Diversions for irrigation of about 12,500 acres substantially affect peak flows. Peaks are principally from snowmelt. Records for 1921-33 furnished by State engineer of Colorado. Base for partial-duration series, 700 cfs. Only annual peaks are shown prior to 1954.

			Peak stages a	and disch	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Aug. 25, 1921	5.90	1,990	1954	Oct. 23, 1953	5.12	942
1927 1928	June 29, 1927 May 3, 1928	5.90 4.00	1,930 1,500	1955	Sept.26, 1954 Aug. 14, 1955	3.82 4.77	737 1,640
1929	Aug. 5, 1929	5.20	2,210	1	Aug. 17, 1955	4.00	875
1931 1932	Sept.15, 1931 Oct. 2, 1931	3.70 4.55	660 1,250	1956	July 31, 1956	4.40	1,210
1933	July 12, 1933	3.20	1,450	1957	June 4, 1957	4.13	1,050
1934 1935	Aug. 26, 1934 May 26, 1935	5.85 1.77	4,900 439		July 26, 1957 Aug. 6, 1957 Aug. 31, 1957	4.02 5.79 4.73	851 2,780 1,130
1936 1937 1938 1939	Sept. 3, 1936 July 28, 1937 Aug. 31, 1938 Sept.10, 1939	4.08 4.60 4.52 3.90	2,310 2,350 1,780 1,170	1958	Apr. 19, 1958 Sept.13, 1958	4.32 4.80	827 1,670
1940	Sept.22, 1940	8.65	4,600	1959	Aug. 7, 1959	3.96	1,020
1941	May 14, 1941	5.90	1,290	1960	Nov. 3, 1959	2.64	289
1942 1943	Oct. 14, 1941 July 31, 1943	7.30 3.10	5,300 860	1961	Aug. 17, 1961	2.64	272
1951 1952	Sept.29, 1951 May 5, 1952	5.71 5.31	1,160 867	1962	Sept.28, 1962	2.94	370

3715. McElmo Creek near Cortez, Colo.

<u>Location</u>.--Lat 37°19', long 108°40', in NE_{π}^{1} sec.1, T.35 N., R.17 W., on left bank half a mile downstream from Alkali Canyon and 5 miles southwest of Cortez.

4,300

Drainage area .-- 233 sq mi.

1953 July 30, 1953 9.15

ee.-Recording. At site 3 miles downstream at different datum prior to Sept. 30, 1929. At site 150 ft upstream at datum 4.20 ft higher Mar. 29, 1940, to Nov. 2, 1941. At present site at datum 4.00 ft higher Nov. 3, 1941, to Sept. 30, 1945. Altitude of gage is 5,700 ft (by barometer). Gage . -- Recording.

Stage-discharge relation.--Defined by current-meter measurements below 240 cfs and extended to 4,540 cfs on basis of slope-area measurement at gage height 5.72 ft.

Remarks. -- Diversions for irrigation of about 200 acres. Flow is mainly return water from irrigated lands of Montezuma irrigation district (water imported from Dolores River basin). Diversion and importation described the followest River basin). Diversion and importation do not substantially affect peak flows. Records for 1926-29 furnished by State engineer of Colorado; for April to September 1940 and October 1943 to September 1945 by Engineering Advisory Committee to Upper Colorado River Basin Compact Commission (from unpublished data from Bureau of Reclamation). Base for partial-duration series, 350 cfs.

Peak stages and discharges of McElmo Creek near Cortez, Colo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Itscharge (cfs)
1927	June 15, 1927	3.50	1,480	1929	Sept. 3, 1929	2.63	864
	June 28, 1927	5.72	4,050	l			
	July 10, 1927	4.20	2,240	1941	Apr. 27, 1941	3.60	705
	July 24, 1927	2.45	714	l	Sept.22, 1941	6.85	4,540
	Aug. 12, 1927	2.73	848				
	Sept. 9, 1927	6.45	5,560	1942	July 17, 1942	2.27	352
	Sept.12, 1927	3.50	1,660	! }	l		
	Sept.25, 1927	3.85	1,990	1943	Jan. 22, 1943	3.45	718
1928	Nov. 1, 1927	1.74	187	1951	Aug. 3, 1951	6.85	478
	1			li .	Sept.30, 1951	7.46	653
1929	Mar. 5, 1929	3.48	1,440				
	Mar. 22, 1929	2.10	410	1952	Oct. 31, 1951	7.30	605
	July 22, 1929	3.80	1,930	1	Dec. 30, 1951	7.85	770
	July 26, 1929	5.05	3,350	[[[
	July 29, 1929	5.10	3,410	1953	July 31, 1953	7.80	694
	Aug. 5, 1929	2.95	1,140		i		
	Aug. 23, 1929	1.95	415	1954	Oct. 20, 1953	5.98	411
	Aug. 26, 1929	2.60	840	ll .	Aug. 20, 1954	8.96	1,280

3720. McElmo Creek near Colorado-Utah State line

Location.--Lat 37°19', long 109°01', in sec.2, T.35 N., R.20 W., on right bank later miles upstream from Colorado-Utah State line, 2 miles upstream from Yellowjacket Creek, and 2 miles west of former town of McElmo.

Drainage area. -- 350 sq mi, approximately.

Gage .-- Recording. Altitude of gage is 4,925 ft (by barometer).

Stage-discharge relation. --Defined by current-meter measurements below 320 cfs and extended above on basis of slope-area measurements at 4.78 and 7.05 ft.

Remarks.--Diversions above station for irrigation of about 1,000 acres above station and about 60 acres below do not materially affect peak flows. Base for partial-duration series, 1,200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Aug. 3, 1951 Aug. 24, 1951 Aug. 29, 1951 Sept.29, 1951	6.77 6.52 7.05 6.62	1,530 1,380 1,700 1,440	1957	July 27, 1957 Aug. 29, 1957 Aug. 31, 1957	7.00 6.52 6.42	1,700 1,370 1,310
1952	Dec. 31, 1951	5.09	660	1958	Sept.13, 1958	5,97	1,030
1953	Aug. 1, 1953	4.78	459	1959	Aug. 24, 1959	5,40	705
1954	Sept.25, 1954	6.02	1,050	1960 1961	Mar. 9, 1960	5.49	740
1955	Aug. 7, 1955	5.23	620	1961	Sept.18, 1961 Oct. 9, 1961	5.34 4.98	678 535
1956	Aug. 1, 1956	4.9	490	1502	000. 3, 1961	4,90	335

3795. San Juan River near Bluff, Utah

Location.--Lat 37°09', long 109°52', in SW_{\pm}^1 sec.7, T.42 S., R.19 E., on left bank 1,600 ft downstream from Gypsum Creek, 1,800 ft upstream from bridge, 20 miles southwest of Bluff, and 114 miles upstream from mouth.

Drainage area. -- 23,000 sq mi, approximately.

<u>Gage.</u>--Nonrecording prior to Oct. 1, 1917, at sites 1,700 ft and 1,650 ft downstream at different datums; recording thereafter. Altitude of gage is 4,048 ft (from levels by Topographic Division, U.S. Geological Survey).

Stage-discharge relation.--Defined by current-meter measurements below 31,000 cfs and extended above; relation very unstable.

<u>Historical data.</u>--Flood of Oct. 11, 1911, which is the greatest known at <u>Shiprock, N. Mex.</u>, probably exceeded that of Sept. 10, 1927, at this station, but stage and discharge have not been determined.

Remarks.--Diversions for irrigation of about 190,000 acres. No diversion between station and mouth of river. Peak discharges may be affected by diversions. Base for partial-duration series, 12,000 cfs. Only annual peaks are shown prior to 1927.

				and discharges				
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1915	July 27, 1915	15.06	26,400	1933	June 3, 1933	13,60	14,500	
					Sept.21, 1933	12.60	12,400	
1916	Mar. 24, 1916	12.8	16,200	ll .			-	
1917	Oct. 15, 1916	18.10	31,400	1934	Aug. 28, 1934	11.30	9,920	
1927	May 6, 1927	12.32	14,200	1935	Tune 17 1075	15.75	21.400	
1341	May 20, 1927	13.50		1935	June 17, 1935	13.75	16,500	
	June 30, 1927	29.95	17,000 62,600	ł	June 22, 1935	17.9	23,800	
	Sept. 7, 1927	15.05	20,600		Sept.28, 1935	17.5	23,600	
	Sept.10, 1927	32.0	70,000	1936	May 7, 1936	12.50	12,700	
	Sept.12, 1927	24.80	47,200	1555	Aug. 6, 1936	12.50	12,500	
	Sept.14, 1927	23.60	43,600	l	Mag. 0, 1000	12.00	12,000	
	Sept.17, 1927	17.00	25,500	1937	Feb. 15, 1937	14.10	15,900	
	Sept.20, 1927	13.50	17,000	1007	Apr. 17, 1937	15.15	18,600	
	Sept.25, 1927	11.80	13,100		May 18, 1937	13,65	15,800	
	- op o - , 100 .	11.00	10,100	l	July 12, 1937	13.7	15,300	
1928	May 3, 1928	12.10	12,100	1	Sept.30, 1937	17.6	23,000	
	June 1, 1928	12.45	12,900				,	
	-,		,	1938	Oct. 1, 1937	17.80	25,000	
1929	Apr. 6, 1929	12.9	15,100		Apr. 25, 1938	13.35	14,400	
	May 11, 1929	11.95	13,200		May 2, 1938	12.90	13,400	
	May 22, 1929	13.20	15,300	l	May 17, 1938	12.65	13,300	
	May 27, 1929	13.25	15,400)]	May 30, 1938	14.80	18,200	
	June 6, 1929	12,40	13,800	il	June 5, 1938	13.25	15,100	
	July 29, 1929	15.70	21,500	II.	June 15, 1938	12.85	13,700	
	July 30, 1929	14.60	18,800	li	June 23, 1938	13.80	15,900	
	July 31, 1929	13.25	15,700		June 28, 1938	12.85	13,700	
	Aug. 2, 1929	17.10	24,200	li .	July 1, 1938	14.70	18,100	
	Aug. 4, 1929	16.00	20,000					
	Aug. 6, 1929	19.40	27,600	1939	Sept.12, 1939	13.1	14,900	
	Aug. 7, 1929	16.20	19,100			_		
	Aug. 8, 1929	14.00	13,500	1940	Sept.30, 1940	14.1	18,500	
	Aug. 12, 1929	27.8	56,000					
	Sept. 3, 1929	12.40	13,100	1941	Apr. 27, 1941	14.40	19,500	
	Sept. 4, 1929	15.10	19,100	l	May 3, 1941	16.50	24,200	
	Sept. 4, 1929	15.60	20,300		May 6, 1941	19.70	33,200	
	Sept.21, 1929	18.10	27,200	li	May 15, 1941	20.2	34,700	
	Sept.23, 1929	21.5	36,400	ľ	May 24, 1941	18.10	30,100	
1070	Me 71 1070	35.00	10.000	l l	June 9, 1941	16.00	22,900	
1930	May 31, 1930	15.20	19,600	}	June 26, 1941	16.08	22,500	
	July 12, 1930	13.8	15,700	1	Aug. 10, 1941	16.70	23,500	
	Aug. 9, 1930	18.8	28,500	1	Sept.23, 1941	14.00	16,700	
	Aug. 10, 1930 Aug. 11, 1930	13.0 15.85	13,800 21,000	1942	Oct. 5, 1941	16.30	22,400	
	Aug. 11, 1930 Aug. 12, 1930	14.50	17,700	1942	Oct. 14, 1941	25.4	49,300	
	Aug. 12, 1930	14.50	17,700	ł	Oct. 14, 1941 Oct. 21, 1941	13.60	15,800	
1931	Aug 1 1071	10.4	0 500	li .	Oct. 26, 1941	15.80	21,900	
1901	Aug. 1, 1931	10.4	8,500		Apr. 7, 1942	13.88	16,100	
1932	Feb. 8, 1932	12.30	13,000		Apr. 9, 1942	12.50	13,200	
1332	Feb. 9, 1932	14.80	18,000		Apr. 14, 1942	13.35	14,500	
	Apr. 18, 1932	13.00	12,600	l	Apr. 24, 1942	15.60	20,200	
	May 24, 1932	14.80	16,900		May 29, 1942	12.70	13,300	
	June 1, 1932	14.95	17,700	1)	, 20, 1042		10,000	
	Aug. 21, 1932	13,00	14,100	1943	May 6, 1943	11.25	10,900	
	Aug. 22, 1932	13,40	14,900		5, 2010		,	
	Aug. 29, 1932	17.20	21,300	1944	May 17, 1944	14.80	18,800	
	J. ,	,		"		li e		

Peak stages and discharges of San Juan River near Bluff, Utah -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Pischarge (cfs)
1944	May 25, 1944	13.40	15,800	1952	June 5, 1952	14.92	20,400
	June 1, 1944 June 13, 1944	13.05 12.86	15,000 15,300	1953	July 30, 1953	10.20	9,270
	June 23, 1944	12.00	13,200			1	,
1945	May 5, 1945	11.30	10,400	1954	Sept.23, 1954	12.40	13,600
1010	11dy 0, 1040	11.50	10,400	1955	Oct. 9, 1954	12.20	13,000
1946	Aug. 13, 1946	9.95	7,340	-000	, , , , , , , , , , , , , , , , , , ,	12.20	10,000
	i -	ļ	_	1956	June 4, 1956	9.43	7,330
1947	Aug. 17, 1947	15.00	24,600				
	Aug. 23, 1947	17.80	27,700	1957	June 8, 1957	15.50	19,700
1948	Oct. 14, 1947	14.40	19.900		June 23, 1957 July 29, 1957	13.67 18.80	16,500 30,200
2010	Oct. 15, 1947	19.20	28,700		Aug. 7, 1957	14.90	20,400
	May 21, 1948	14.06	15,900		Aug. 30, 1957	12.55	14,700
	June 2, 1948	13.90	17,000	l	1.0, 11,		,
	June 5, 1948	14.48	18,800	1958	Apr. 23, 1958	13.25	15,500
	_				May 30, 1958	13.83	17,000
1949	June 21, 1949	17.92	27,900		June 9, 1958	13.44	17,200
	Aug. 9, 1949	11.54	12,200	3050			
1950	June 23, 1950	9.85	7,710	1959	Aug. 8, 1959	7.96	5,370
	1	1	,,,,,	1960	June 6, 1960	9.97	9,150
1951	Sept.30, 1951	12.30	15,900		, , , ,		
	1	1		1961	Sept. 9, 1961	9.38	7,540
1952	Apr. 30, 1952	12.63	13,700	1962	App 23 1062	10.07	10,300
	May 7, 1952	14.08	17,100	1962	Apr. 23, 1962	10.97	10,3

COLORADO RIVER MAIN STEM

3800. Colorado River at Lees Ferry, Ariz.

<u>Location</u>.--Lat 36°51'55", long lll°35'15", in $NE_{\pi}^{1}SE_{\pi}^{1}$ sec.13, T.40 N., R.7 E., at head of Marble Gorge, at Lees Ferry, just upstream from Paria River, 28 miles downstream from Utah-Arizona State line, 61.5 miles upstream from Little Colorado River, and 79 miles downstream from San Juan River.

Drainage area. -- 107,900 sq mi, approximately.

Gage .-- Nonrecording prior to Jan. 19, 1923, at sites within 400 ft of present gage, at different datums; recording thereafter. Datum of gage is 3,106.16 ft above mean sea level, datum of 1929.

Stage-discharge relation. --Defined by current-meter measurements below 120,000 cfs and extended above on basis of discharge computed for flood of June 18, 1921, at station near Grand Canyon. Relation subject to shifting.

<u>Historical data</u>.--Flood of July 7, 1884, reached a stage of 31.5 ft, from flood-marks at mouth of Paria River (discharge, about 300,000 cfs).

Remarks. -- Peak discharges slightly affected by storage and diversions. Combined capacity of all reservoirs above station was about 1,700,000 agreeft in 1950. Base for partial-duration series, 35,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1884	July 7, 1884	31.5	a300,000	1925	Apr. 21, 1925	11.88	35,500
1921	June 18, 1921	26.5	a220,000		June 3, 1925 June 25, 1925	13.60 13.4	54,900 52,500
1922	May 10, 1922 May 31, 1922 June 12, 1922	16.90 19.8 19.0	86,800 116,000 110,000	1926	Oct. 6, 1925 May 9, 1926 May 29, 1926 July 14, 1926	12.37 15.09 16.7 12.40	36,500 73,000 86,500 37,600
1923	May 14, 1923 May 31, 1923 June 19, 1923 Sept.20, 1923	14.84 17.5 16.64 13.81	74,000 98,300 90,600 57,800	1927	May 8, 1927 May 22, 1927 June 22, 1927	14.51 16.71 15.07	66,000 91,200 72,800
1924	Apr. 18, 1924 Apr. 27, 1924 May 23, 1924 June 17, 1924	12.98 12.20 14.56 15.2	47,300 38,500 67,600 76,200	1928	July 1, 1927 Sept.11, 1927 Sept.13, 1927	20.35 14.43 20.23	127,000 63,500 126,000 90,500

1941

1942

1943

Oct.

Oct.

Apr.

Apr.

Apr.

May

Mav 30ĺ

Mav

June

15, 1941

27, 1941

8, 1942

17, 1942

26, 1942

15, 1942 1942

7, 1943

1943

20.51

16.10

16.47 12.97

14.06

15.45 15.42 14.90 17.30

14.45

15.14

120,000

77,200

89,200

42,700

70,300

71,500 64,500

92,800

59,600

68,600

1959

1960

1961

1962

June 19, 1959

Apr. 16, 1960

May

June

June

Apr.

May

Мау

19, 1960 8, 1960

5. 1961

2, 1962 16, 1962

18, 1962

1962

38,900

39,300 41,500 46,700

40,200

37,400

71,100 85,000

57,000

12.53

12.63

12.99

13.43

12.78

12.55

15.78

17.22

14.57

Peak stages and discharges of Colorado River at Lees Ferry, Ariz. -- Continued Gage Gage Water Discharge Water Discharge Date Date height height year (cfs) vear (cfs) (feet) (feet) 1928 June 3, 1928 19.55 115,000 1944 19, 1944 4, 1944 17.20 94,400 Mav June 16.71 84,200 1929 36,300 42,000 Mar. 14, 1929 12.00 7, 1929 12.66 17, 1945 14.90 1945 64,400 Apr. May 23, 12.94 31, 1945 11, 1945 18, 1945 52,400 55,800 55,100 Apr. 1929 43,900 May 13.90 May 29, 1929 18.89 114,000 June 12, June 1929 17.55 101,000 June 14.14 Aug. 1929 14.36 7, Aug. 1929 15.27 73,300 1946 May 2, 1946 12.72 39,400 Aug. 13, 1929 Sept. 9, 1929 15.07 71,000 June 14, 1946 13.66 50,400 9, 13.06 13.51 46,500 1947 Sept.24. 1929 50,400 1947 13, 16.26 80,400 May June 14, 1947 June 24, 1947 Aug. 5, 1947 Aug. 24, 1947 67,300 15.22 12.67 71,600 38,500 1930 Apr. 1930 42,100 46,700 15.55 Apr. 28, 1930 13.21 12.54 June 3, 1930 15.15 73,300 13.50 47,100 16, 1930 June 14.64 65,600 12, Oct. 41,200 A118. 1930 13.43 48,100 1948 16, 1947 12.88 Apr. 25, 1948 May 11, 1948 May 25, 1948 14.30 13.95 17.76 54,000 50,500 1931 May 1931 12.05 34,600 92.400 23, 1932 Apr. 1932 12.89 40,900 102,000 72,300 May 26, 1932 18.30 1949 May 2, 1949 13.94 52,700 15.38 June 22, 1949 June 28, 1932 20.0 119,000 14, July 1932 12.97 42,000 Apr. 27, 1950 June 6, 1950 July 10, 1950 30, 1932 14.01 1950 12.45 37,400 Aug. 54,800 60,600 14.81 1933 June 1933 1933 82,700 35,300 12.81 16.45 9, July 12.13 1951 June 1, 1951 15.27 67,300 June 25, 1934 May 16, 1934 62,800 11.05 25.300 14.78 1951 1952 May 9, 1952 June 12, 1952 19.9 113,000 1935 June 19, 1935 18.90 105,000 21.15 123,000 1936 May 9, 1936 15.37 69,000 1953 June 17, 1953 15.60 69,600 23, 1936 13, 1936 May 16.14 12.22 76,300 35,300 July 1954 26, 1954 12.04 34,300 Mav 47,000 84,800 68,000 13.14 May 19, 1955 June 13, 1955 12.30 12.41 35,200 35,600 1937 Apr. 19, 1937 1955 May May 20, 1937 16.88 2, June 1937 15.13 May 1956 12, 1956 12.82 40,200 1938 4, Mav 1938 15.75 72,500 73,500 June 6, 1956 15.68 69,600 22, 1938 15.80 May 8, 1938 26, 1938 June 18.45 16.13 101,000 1957 14, 1957 15.35 64,600 126,000 Mav June 12, 1957 July 30, 1957 21.14 June 65,900 9, 1939 26, 1939 49,700 49,700 8, 1957 1, 1957 1939 Мау 13.70 Aug. 14.02 51,100 May 13.86 Sept. 13.86 8, 1939 June 13.19 43,600 Oct. 23, 1957 Nov. 5, 1957 12.35 13.05 36,600 43,000 1958 1940 May 1940 13,54 47,200 Apr. 25, 1958 June 1, 1958 June 5, 1940 12.96 42,400 14.63 58,600 19.00 105,600 May 17, 1941 June 22, 1941

3815. Paria River near Cannonville, Utah

Location.--Lat 37°30', long 112°02', in T.38.S., R.2 W., on left bank 3 miles upstream from Sheep Creek and 6 miles south of Cannonville.

Drainage area. -- 220 sq mi, approximately.

Gage.--Recording prior to 1959; crest-stage gage thereafter. Altitude of gage is 5,440 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 100 cfs and extended above on basis of slope-area measurements at gage heights 7.20 and 7.76 ft and logarithmic plotting.

Remarks.--Diversions for irrigation of about 2,700 acres above station do not materially affect peak flows. Base for partial-duration series, 200 cfs. Only annual peaks are shown 1959-62.

Peak	stages	and	discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Tischarge (cfs)
1951	Aug. 3, 1951 Aug. 29, 1951	7.76 5.75	2,040 281	1954	July 24, 1954 Sept. 3, 1954 Sept.11, 1954	6.60 6.58 7.38	820 805 1,600
1952	June 3, 1952 July 8, 1952 Aug. 26, 1952 Sept.21, 1952	5.53 5.66 6.60 7.20	229 256 820 1,400	1955	Oct. 3, 1954 Oct. 7, 1954 July 24, 1955 July 26, 1955	6.30 8.75 8.48 6.60	610 3,400 2,990 820
1953	July 10, 1953 July 13, 1953 July 15, 1953 July 17, 1953 July 29, 1953 July 30, 1953	5.92 7.21 6.17 6.90 6.75 9.35 9.03	386 1,410 558 1,080 945 4,390		Aug. 3, 1955 Aug. 4, 1955 Aug. 11, 1955 Aug. 13, 1955 Aug. 16, 1955 Aug. 25, 1955	6.10 5.90 7.15 6.55 9.76 6.90	485 375 1,340 782 3,600 1,080
	July 31, 1953 Aug. 1, 1953 Aug. 15, 1953 Aug. 22, 1953 Aug. 28, 1953	8.90 6.45 7.09 7.90	3,840 3,630 710 1,280 2,210	1959 1960 1961	Aug. 12, 1959 June 6, 1960 Aug. 3, 1961	14.32 12.69 12.40	7,500 6,200 5,900
1954	June 25, 1954	5.68	273	1962	Sept.20, 1962	6.89	1,060

3820. Paria River at Lees Ferry, Ariz.

Location.--Lat 36°52'20", long lll°35'40", in $NW_u^2NE_u^2$ sec.13, T.40 N., R.7 E., half a mile upstream from mouth and 1 mile northwest of Lees Ferry.

Drainage area. -- 1,570 sq mi, approximately.

Gage.--Nonrecording prior to Sept. 12, 1929; recording thereafter. At site 2,000 ft upstream at different datum prior to Oct. 5, 1925. Datum of gage is 3,123.40 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs and extended above by float-area determination at gage height 16.3 ft, and several determinations of increase in flow of Colorado River below mouth of Paria River. Relation subject to shifting.

Bankfull stage .-- 20 ft.

Remarks.--Peak discharges unaffected by small irrigation diversions. Base for partial-duration series, 1,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Sept.10, 1924	6.0	a4,330	1929	July 11, 1929	7.1	2,240
_	1	i		li	July 28, 1929	8.2	3,440
1925	Sept.19, 1925	6.5	a4,800	j)	July 31, 1929	8.6	3,920
1926	Oct. 5, 1925	16.3	a16,100		Aug. 2, 1929 Aug. 4, 1929 Sept. 3, 1929	13.8 8.0 7.9	12,000 3,210 3,100
1927	Sept.13, 1927	16.0	al4,300		Sept. 8, 1929	10.2	6,000
1928	July 16, 1928	7.50	a2,960	1930	July 30, 1930	7.80	2,540
a Anr	nual peak only.	•	•		•		•

Peak stages and discharges of Paria River at Lees Ferry, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Aug. 8, 1930 Aug. 11, 1930 Sept. 8, 1930	7.17 11.0 7.48	1,730 7,150 2,110	1945	Aug. 13, 1945 Sept. 3, 1945	8.10 8.83	2,340 3,290
1931	Sept.30, 1930 Nov. 18, 1930	7.21 7.53	1,780 2,190	1946	Oct. 16, 1945 July 25, 1946 Aug. 11, 1946	9.30 10.0 7.55	3,930 4,980 1,740
				l	Aug. 15, 1946	8.94	3,430
1932	Feb. 9, 1932 July 13, 1932 Aug. 9, 1932 Aug. 22, 1932	9.53 9.87 7.22 7.49	4,880 5,260 1,530 1,880	1947	Aug. 17, 1946 Aug. 24, 1946 Oct. 29, 1946	9.94 8.90 7.64	4,830 3,360 1,590
1077	Aug. 28, 1932	13.0	10,500	1347	Aug. 22, 1947 Aug. 28, 1947	11.77	7,650 1,620
1933	July 18, 1933 Aug. 7, 1933 Aug. 22, 1933	7.82 7.35 8.81	2,300 1,690 3,660	1948	Aug. 5, 1948	11.6	6,150
	Sept. 9, 1933	8.35	3,020	1949	Sept.29, 1949	10.0	3,410
1934	May 29, 1934 Aug. 29, 1934	8.54 11.8	3,290 8,400	1950	July 19, 1950	8.17	1,340
1935	Sept. 1, 1935	8.12	2,700	1951	Aug. 4, 1951 Aug. 29, 1951	11.5 11.5	4,480 4,180
1936	July 11, 1936 July 26, 1936	11.95 7.30	8,700 1,630	1952	Sept.22, 1952	9.0	1,830
	July 28, 1936 Aug. 4, 1936 Aug. 6, 1936	8.18 7.80 9.44	2,780 2,270 4,610	1953	July 18, 1953 Aug. 27, 1953	9.7 12.8	2,100 6,400
	Aug. 17, 1936 Aug. 31, 1936 Sept. 2, 1936	8.09 9.62 11.45	2,660 4,880 7,840	1954	July 25, 1954 Sept.12, 1954	10.8 11.2	3,440 3,980
1937	Sept.12, 1936 Oct. 20, 1936	8.73 7.24	3,550 1,560	1955	Oct. 8, 1954 Oct. 9, 1954 Aug. 17, 1955	10.4 9.75 11.1	2,350 1,800 3,010
200	Feb. 7, 1937 July 9, 1937 Aug. 29, 1937	8.12 7.99 8.85	2,700 2,520 3,720	1956	Aug. 17, 1956	9.3	1,420
1938	Mar. 3, 1938 June 29, 1938 Sept. 1, 1938	11.22 7.56 7.72	7,440 1,960 2,170	1957	July 12, 1957 July 13, 1957 Aug. 22, 1957 Aug. 30, 1957	11.33 9.8 11.20 10.87	3,240 1,820 3,310 2,780
1939	Sept. 7, 1939 Sept.11, 1939 Sept.13, 1939	11.31 7.92 12.9	7,040 1,990 9,800	1958	Oct. 12, 1957 Nov. 3, 1957 Aug. 23, 1958	9.67 10.53 10.88	2,090 3,140 3,690
1940	Jan. 12, 1940 Aug. 24, 1940	7.4 10.1	1,480 5,130		Sept.12, 1958 Sept.24, 1958	15.3 11.13	(b) 3,770
	Sept. 6, 1940 Sept.14, 1940 Sept.18, 1940	16.0 11.2 12.4	14,000 5,800 7,800	1959	Aug. 3, 1959 Aug. 13, 1959 Aug. 19, 1959	10.20 10.45 11.80	2,270 2,880 5,370
1941	Oct. 26, 1940 July 24, 1941	7.95 12.3	2,060 7,500	1960	June 7, 1960	7.67	370
1942	Oct. 28, 1941	7.50	1,680	1961	Oct. 9, 1960 Aug. 4, 1961 Aug. 25, 1961	11.40 13.15 9.70	4,340 8,040 1,900
1943	Aug. 17, 1943 Aug. 22, 1943 Sept.28, 1943	8.50 9.8 7.7	2,830 4,680 1,890		Sept. 18, 1961 Sept. 18, 1961	11.2	3,800 5,370
1944	Oct. 19, 1943	12.1	8,400	1962	Feb. 13, 1962 Sept.21, 1962 Sept.24, 1962	10.04 10.77 9.40	2,160 2,830 1,460
1945	Aug. 1, 1945 determined.	7,55	1,740		Sept.28, 1962	10.55	2,660

3840. Little Colorado River above Lyman Reservoir, near St. Johns, Ariz.

<u>Location</u>.--Lat 34°20', long 109°22', in $NE_{4}^{1}SE_{4}^{1}$ sec.27, T.11 N., R.28 E., 1 mile downstream from Coyote Creek, $4\frac{1}{2}$ miles upstream from Lyman Dam, and 13 miles south of St. Johns.

Drainage area. -- 747 sq mi.

Gage.--Recording Apr. 27 to July 25, 1940, at site 600 ft upstream at datum 1.70 ft higher and at present site since Oct. 27, 1940. Nonrecording at various sites and datums within 1 mile upstream Apr. 10-26, Aug. 2 to Oct. 27, 1940. Datum of gage is 5,988.8 ft above mean sea level, datum of 1929. All gage heights listed referenced to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 500 cfs and extended above by slope-area measurement at gage height 17.1 ft. Relation subject to shifting.

<u>Historical data.</u>--Flood of July 25, 1940 (gage height, 17.1 ft, present datum, from floodmarks), was considered highest in previous 40 years by local residents.

Remarks.--Peak discharges not materially affected by diversions for irrigation and many small reservoirs totaling about 15,000 acre-ft. Base for partial-duration series, 400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 25, 1940	17.1	a16,000	1951	Aug. 4, 1951	7.95	484
1941	May 7, 1941 July 23, 1941 Aug. 12, 1941	7.12 8.56 5.3	1,510 2,520 642	1952	Apr. 17, 1952 Aug. 16, 1952 Aug. 28, 1952	7.05 8.2 9.6	489 972 1,570
1942	Aug. 10, 1942	4.54	379	1953	Aug. 10, 1953	5.75	229
1943	Aug. 7, 1943 Aug. 22, 1943	5.62 8.37	768 2,360	1954	July 10, 1954 July 21, 1954 July 22, 1954	8.5 8.1 7.4	1,090 928 672
1944	Aug. 15, 1944 Aug. 23, 1944	9.57 6.65	3,400 1,250		July 23, 1954 July 24, 1954 July 26, 1954	9.4 7.2 7.6	1,380 505 644
1945	July 30, 1945 Aug. 6, 1945 Aug. 11, 1945	6.12 5.54 6.29	661 441 740	1955	Aug. 5, 1954 July 12, 1955	9.5 7.86	1,390 672
1946	July 18, 1946 July 21, 1946 Aug. 4, 1946 Aug. 7, 1946 Aug. 12, 1946	8.5 6.70 13.1 11.4 7.88	1,400 520 6,000 3,820 880		Aug. 10, 1955 Aug. 18, 1955 Aug. 21, 1955 Aug. 23, 1955 Aug. 27, 1955	7.32 12.5 12.4 12.6 9.50	425 2,990 2,920 2,990 780
	Aug. 28, 1946 Sept.20, 1946	7.33 8.42	495 1,000	1956	Aug. 18, 1956	8.27	206
1947	July 22, 1947 Aug. 10, 1947 Aug. 18, 1947 Aug. 22, 1947 Aug. 26, 1947	9.8 9.05 8.5 9.98 8.78	1,460 900 634 1,620 830	1957	July 17, 1957 Aug. 1, 1957 Aug. 23, 1957 Aug. 25, 1957 Aug. 27, 1957	10.34 9.57 9.17 10.75 12.11	1,160 622 405 1,500 2,850
7040	Aug. 29, 1947	7.82	402	1958	Apr. 23, 1958 Apr. 30, 1958	11.28 10.26	1,120 748
1948	Apr. 17, 1948	8.22	a732	1959	July 20, 1959	10.88	1,070
1949	Apr. 24, 1949 July 12, 1949 Aug. 2, 1949	6.80 6.41 8.35	524 426 1,000		July 29, 1959 Aug. 8, 1959	9.08 11.70	412 1,340
	Aug. 8, 1949	7.60	638	1960	Mar. 30, 1960	8.52	323
1950	July 18, 1950	4.84	181	1961	Aug. 11, 1961	9.73	619
1951	July 21, 1951 Aug. 2, 1951	9.7 12.4	1,550 3,200	1962	Apr. 16, 1962	10.03	736

3865. Little Colorado River above Zuni River, near Hunt, Ariz.

<u>Location</u>.--Lat 34°38', long 109°40', in $SW_{4}^{1}NW_{4}^{1}$ sec.2, T.14 N., R.25 E., 500 ft upstream from Zuni River and 3 miles northwest of Hunt.

<u>Drainage area.--3,680 sq mi, approximately (including 830 sq mi in closed basin surrounding Quemado, N. Mex.).</u>

Gage.--Recording. Datum of gage is 5,399.0 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 720 cfs and extended above.

Bankfull stage .-- 10 ft.

 $\frac{\text{Remarks.}\text{--Peak discharges are affected by irrigation diversions and many reservoirs (combined capacity, about 44,000 acre-ft in 1940 and 54,000 acre-ft in 1950). Base for partial-duration series, 70 cfs.}$

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	July 26, 1940	3.46	577	1948	Sept.17, 1948	2.17	75
	Aug. 21, 1940	2.69	186	ll .			· ·
	Aug. 27, 1940	2.97	298	1949	Aug. 3, 1949	2.28	99
	Sept. 8, 1940	2.48	126	ll .	Aug. 7, 1949	2.68	244
	Sept.18, 1940	2.37	101	ii	Aug. 10, 1949	3.11	478
	Sept.24, 1940	2.40	· 107		1		1
		{	İ	1950	July 7, 1950	2.41	140
1941	Mar. 15, 1941	2.56	150	ll .	1		
	May 11, 1941	3.37	516	1951	Aug. 28, 1951	2.19	70
	July 26, 1941	2.96	289	II.			
		ĺ		1952	July 27, 1952	2.12	67
1942	Oct. 7, 1941	1.98	37	li .	1		
3047	g es -e			1953	July 27, 1953	2.02	62
1943	Sept.25, 1943	1.61	11]			
1944	g+ 60 3044			1954	July 26, 1954	2.40	136
1944	Sept.26, 1944	2.36	101	3.055	j		
1945	Aug. 11, 1945	2.79	226	1955	Aug. 3, 1955	2.16	81
1340	Aug. 11, 1945 Aug. 13, 1945			ii	Aug. 6, 1955	2.10	72
	Aug. 21, 1945	4.13 2.41	1,100 115	ll	Aug. 12, 1955	3.38	714
	Aug. 21, 1945 Aug. 23, 1945	2.41	88	li .	Aug. 24, 1955	3,73	831
	Aug. 25, 1345	2.22	00	1956	Feb. 19, 1956	1.70	37
1946	July 18, 1946	2.38	122	1330	Feb. 13, 1336	1.70	21
1010	July 23, 1946	2.37	119	1957	Aug. 5, 1957	2.00	82
	Aug. 4, 1946	3.60	745	130,	Aug. 23, 1957	2.26	142
	Aug. 8, 1946	2.80	274		Aug. 25, 1957	2.47	200
	Aug. 12, 1946	2.76	257		Sept. 1. 1957	3.10	476
	Aug. 14, 1946	2.56	180	1)	Depu. 1, 1501	3.10	4,0
	Aug. 21, 1946	2.55	177	1958	Aug. 21, 1958	3.85	1,020
	Sept.19, 1946	2.42	136	1000	1.06. 21, 1000	0.00	2,020
	Sept.21, 1946	2.37	122	1959	Aug. 11, 1959	2.24	130
				11 - 5 - 5 - 5			100
1947	Aug. 4, 1947	2,86	301	1960	Oct. 30, 1959	1.67	38
	Aug. 9, 1947	2.43	139	1	,		
	Aug. 14, 1947	2.25	92	1961	Sept.11, 1961	1.28	2.6
	Aug. 22, 1947	2.35	122		,		
	Aug. 26, 1947	2.55	187	1962	Jan. 31, 1962	al.48	_

a Backwater from ice.

3879.8. Zuni River at mouth near Hunt, Ariz.

Location.--Lat 34°38'43", long 109°40'25", in NW $\frac{1}{4}$ sec.2, T.14 N., R.25 E., $\frac{1}{4}$ miles northwest of Hunt, Apache County.

Drainage area. -- 2,580 sq mi.

Gage . -- None .

Remarks.--Peak discharge computed by subtracting peak discharge of Little Colorado River above Zuni River, near Hunt from peak discharge of Little Colorado River near Hunt. Only annual peaks are shown.

Peak stages and discharges of Zuni River at mouth near Hunt, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1940	July 26, 1940	-	1,880	1952 1953	Sept.22, 1952 July 18, 1953	-	382 20
1941	July 25, 1941	_	1.560	1954	July 26, 1954	_	78
1942	Oct. 4, 1941	-	688	1955	Aug. 8, 1955	-	2,490
1943	Aug. 11, 1943	-	508				
1944	Sept.30, 1944	-	449	195€	July 22, 1956	_	127
1945	Aug. 13, 1945	-	490	1957	Sept. 1, 1957	_	440
				1958	Aug. 21, 1958	-	a800
1946	Aug. 5, 1946	-	2,310	1959	Aug. 4, 1959	_	191
1947	Aug. 23, 1947	_	1,170	1960	Oct. 30, 1959	-	442
1948	Oct. 14, 1947	-	887	ii .			
1949	Aug. 9, 1949	-	3,610	1961	Aug. 15, 1961	-	272
1950	July 24, 1950	-	104	1962	Oct. 31, 1961	-	111
1951	Aug. 28, 1951	-	565				

a About.

3880. Little Colorado River r ar Hunt, Ariz.

Location. --Lat 34°39', long 109°42', in NE¹/₄NW¹/₄ sec.4, T.14 N., R.25 E., at bridge on U.S. Highway 260, 2 miles downstream from Zuni River and 5 miles northwest of Hunt.

 $\underline{\underline{Drainage\ area.}\text{--}6,280\ sq\ mi}$, approximately (including 830 sq mi in closed basin surrounding Quemada, N. Mex.).

Gage.--Recording. Datum of gage is 5,371.59 ft above mean sea level, datum of 1929. At datum 0.16 ft lower prior to Sept. 1, 1931, and 2.16 ft lower Sept. 1, 1931, to October 1933.

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs and extended above by logarithmic plotting.

Remarks.--Peak discharges not materially affected by diversions and reservoirs (combined capacity, about 54,000 acre-ft in 1938 and 63,000 acre-ft in 1950). Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	July 28, 1929	17.0	8,000	1940	July 26, 1940	10.34	2,110
ł	Aug. 1, 1929	9.9	2,950		July 29, 1940	7.11	629
	Aug. 8, 1929	6.90	1,400	li .	Aug. 15, 1940	7.55	838
ĺ	Aug. 13, 1929	7.78	1,800	[[Aug. 26, 1940	8.30	1,120
	Aug. 22, 1929	6.15	1,080	II.	Sept. 6, 1940	7.52	918
	Sept. 3, 1929	5,50	850]}	, ====		1
- 1	Sept. 6, 1929	6.44	1,220	1941	Mar. 15, 1941	7.41	816
	Sept.23, 1929	11.6	3,960		Apr. 3, 1941	7.22	767
- 1				ff .	May 10, 1941	6.71	636
1930	Oct. 16, 1929	4.74	716	·	July 25, 1941	8.96	1,560
1	July 18, 1930	3.96	729	}}	Sept.30, 1941	7.34	854
	July 21, 1930	3.75	663		2070.00, 2012	1.01	904
	Aug. 7, 1930	4.66	965	1942	Oct. 4, 1941	6.99	725
- 1	Aug. 10, 1930	3.60	624		1, 1011	0.55	,,,,
1	J. , -			1943	Aug. 11, 1943	6.40	508
1931	July 19, 1931	3.99	764	1010	1148. 11, 1040	0.40	300
	July 28, 1931	10.05	3,310	1944	Sept.30, 1944	7.51	451
	July 31, 1931	4.9	1,070	2011	Depo. 00, 1541	,.01	401
i	Aug. 5, 1931	10.5	3,600	1945	Aug. 13, 1945	10.87	1,590
1	Aug. 9, 1931	3.66	718	20.00	g. 10, 1040	10.07	1,550
J	Aug. 31, 1931	3.43	653	1946	Aug. 5, 1946	13.90	2,390
- 1	Sept.16, 1931	5.44	653	1010	Aug. 8, 1946	12.78	1,840
	Sept.28, 1931	5.40	643		Aug. 12, 1946	11.34	1,400
- 1				l l	Sept.19, 1946	9.09	710
1932	Oct. 2, 1931	6.98	1,070	i	Sept.15, 1540	3.03	110
j	Mar. 27, 1932	5.53	604	1947	Aug. 4, 1947	8.94	662
1	Apr. 14, 1932	6.20	617	1011	Aug. 23, 1947	10.50	1,290
	July 30, 1932	7.13	905	l,	1145. 20, 101	10.00	1,230
i	Aug. 22, 1932	7.31	980	1948	Oct. 14, 1947	9.49	925
i	Aug. 29, 1932	7.83	1,200	1340	000. 14, 154,	3,43	32.3
į.		1.00	1,200	1949	Aug. 7, 1949	13.8	2,360
1933	July 24, 1933	12.4	3,600	1545	Aug. 9, 1949	16.87	4,050
	July 30, 1933	6.50	662	ł	Aug. 3, 1343	10,07	4,050
1	Aug. 10, 1933	6.70	735	1950	July 24, 1950	6.42	119
1	Sept.10, 1933	7.39	1,010	1550	July 24, 1950	0.42	119

1955

Aug. 8, 1955 Aug. 12, 1955 Aug. 17, 1955 Aug. 24, 1955 Aug. 29, 1955

1955

Aug. 29,

17.3

12.37

11.44

14.5

12.92

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Aug. 28, 1951	9.74	531	1956	July 22, 1956	8.30	145
1952	Sept.22, 1952	9.07	39 5	1957	Sept. 1, 1957	12.47	882
1953	July 18, 1953	7,02	42	1958	Aug. 21, 1958	15.44	1,400
1954	July 26, 1954	8.86	214	1959	Aug. 4, 1959	10.33	235

1960

1961

1962

Oct. 30, 1959

Aug. 15, 1961

Oct. 31, 1961

11.70

10.55

9.22

453

272

112

Peak stages and discharges of Little Colorado River near Hunt, Ariz .-- Continued

3925. Show Low Creek at Show Low, Ariz.

2,550

1,460

860

632

984

<u>Location</u>.--Lat 34°15'10", long 110°01'40", in NE $\frac{1}{u}$ sec.20, T.10 N., R.22 E., at bridge on U.S. Highway 60 at Show Low.

Drainage area. -- 87 sq mi, approximately, 20 sq mi of which is below Jaques Dam.

Gage. -- Recording, except nonrecording near present site July 2°, 1951, to Apr. 5, 1952. Datum of gage is 6,309.22 ft above mean sea level, datum of 1929.

 $\frac{Stage-discharge\ relation}{and\ extended\ above\ on\ basis\ of\ slope-area measurement\ at\ 9.9\ ft.}$

Remarks. -- Records prior to March 1945 compiled by Bureau of Reclamation. Peak discharges prior to spring of 1953 slightly affected by irrigation diversions and several reservoirs (combined capacity, 2,400 acre-ft). Peak discharges greatly affected after completion of Jaques Dam in spring of 1953, increasing that appealing of the completion of the peak for restriction of the completion of the peak for restriction of the completion of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak for restriction of the peak discharges and the peak for restriction of the peak discharges are peaked by the peak for restriction of the peak discharges are peaked by the total capacity of reservoirs to 8,800 acre-ft. Base for partial-duration series, 150 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar. 14, 1941	9.30	a3,200	1949	Dec. 23, 1948 Jan. 13, 1949	3.74 5.38	290 840
1942	Oct. 13, 1941	3,12	a211		Feb. 23, 1949	5.04	740
1943	Mar. 5, 1943	5.22	a768		Mar. 7, 1949 Aug. 6, 1949	5.22 3.73	800 330
1944	Mar. 16, 1944	4.00	a472	1950	Mar. 3, 1950	3.34	238
1945	Mar. 10, 1945 Mar. 27, 1945	3.57 3.18	302 211	1951	Aug. 28, 1951	3.10	170
	1101. 21, 1010	0.10	222	1952	Dec. 31, 1951	_	b2,500
1946	July 14, 1946	7.8	750		Jan. 13, 1952	8.0	3,000
	Sept.19, 1946	6.71	1,200		Jan. 18, 1952 Mar, 17, 1952	9.9	6,250 bl,000
1947	Nov. 25, 1946	3.96	166		Mar. 31, 1952	4.34	238
1948	Oct. 14, 1947	5.18	618	S	Apr. 27, 1952	6.39	1,190
1040	Dec. 2, 1947	3.61	151	1953	Mar. 8, 1953	5.06	444
	Feb. 18, 1948	3.37	153		3, 1000	00	***
	Mar. 18, 1948	3.56	202	1954	Mar. 23, 1954	5.0	440
	Mar. 24, 1948	3.77	248	 	Mar. 27, 1954	4.65	336
	July 27, 1948	5.03	640				

a Annual peak only. b Estimated.

3935. Silver Creek near Snowflake, Ariz. (Published as "near Woodruff" prior to 1952)

Location.--Lat 34°40'00", long 110°02'30", in $SM_{\overline{u}}^{1}NW_{\overline{u}}^{1}$ sec.29, T.15 N., R.22 E., on left bank 6 miles upstream from mouth and 14 miles north of Snowflake.

<u>Drainage area.</u> --886 sq mi at present site; 942 sq mi at site used prior to October 1950.

<u>Gage.</u>--Recording. At site $5\frac{1}{2}$ miles downstream prior to October 1950. Datum of present gage is 5,204.1 ft above mean sea level, datum of 1929. Altitude of gage at former site is 5,196 ft (from river-profile map).

Stage-discharge relation. -- For site in use prior to October 1950, defined by current-meter measurements below 3,700 cfs and extended above on basis of slope-area measurement at 11,000 cfs. At present site, defined by current-meter measurements below 4,400 cfs and extended above on basis of relation at former site.

Remarks.--Peak discharges prior to 1953 not significantly affected by irrigation and storage above station. Completion of Jaques Dam in spring of 1953 increased total capacity of reservoirs above station from 7,500 acre-ft to 13,700 acre-ft, not including Lone Pine Reservoir. This flood record is a combination of records published for station near Woodruff through water year 1952 (listed here through 1950) and present gage established in 1950. Records for 1951 and 1952 indicate that floodflows at these two points are almost identical. Base for partial-duration series, 1,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	July 21, 1929 July 25, 1929 July 31, 1929	11.67 6.45 3.66	10,500 3,050 1,020	1941	Mar. 15, 1941 Sept.28, 1941	7.61 5.55	3,700 1,640
	Aug. 3, 1929 Aug. 7, 1929	3.98 4.47	1,100 1,440	1942	Oct. 3, 1941	4.33	932
1930	Sept.23, 1929 July 12, 1930	6.47 4.57	3,070 1,520	1943	July 24, 1943 Aug. 2, 1943	5.24 5.32	1,360 1,400
1350	Aug. 11, 1930	6.40	3,000	1944	Aug. 31, 1943 Aug. 25, 1944	7.08 3.49	3,120 416
1931	July 16, 1931 July 24, 1931	4.25 4.28	1,290 1,310	1945	July 29, 1945	5.68	1,730
	Aug. 7, 1931 Sept. 6, 1931	5.49 6.24	2,200 2,850		Aug. 5, 1945 Aug. 11, 1945	5.25 7.06	1,400 3,230
1932	Feb. 9, 1932 Mar. 1, 1932 July 9, 1932	11.35 4.01 4.60	9,900 1,120 1,530	1946	July 21, 1946 Aug. 5, 1946 Sept.19, 1946	4.94 4.81 5.67	1,140 1,040 1,680
1933	Aug. 20, 1933 Sept.10, 1933	5.07 7.83	1,780 4,600	1949	Jan. 13, 1949	6,88	b2,900
1934	-	-	ab2,000	1950	July 7, 1950	4,93	bl,160
1935	Sept.27, 1935	6,22	b2,820	1951	Aug. 28, 1951	10.5	3,780
1936	July 25, 1936 July 30, 1936 Aug. 4, 1936 Aug. 6, 1936	7.60 4.12 4.28 5.18	4,300 1,060 1,180 1,890	1952	Dec. 31, 1951 Jan. 13, 1952 Jan. 19, 1952 July 6, 1952 Aug. 20, 1952	10.3 12.4 18.0 6.6 9.9	3,620 5,220 10,100 1,260 3,330
1937	Feb. 7, 1937 Mar. 15, 1937 Mar. 17, 1937	7.57 4.59 4.69	4,300 1,400 1,480	1953	Sept.22, 1952 July 16, 1953	8.8 5.9	2,530 1,060
1938	Mar. 4, 1938 Aug. 7, 1938 Aug. 8, 1938 Sept. 1, 1938	6.28 5.51 6.52 4.13	2,900 2,140 3,100 1,090	1954	Mar. 23, 1954 July 3, 1954 July 23, 1954 Aug. 4, 1954 Sept. 2, 1954 Sept. 5, 1954	5.92 6.36 6.55 6.10 15.3 12.6	1,060 1,200 1,320 1,080 7,670 5,380
1939	Aug. 6, 1939 Aug. 29, 1939	4.44 4.64	1,310 1,460	1955	June 13, 1955	6.6	1,320
1940	July 16, 1940 July 26, 1940 Aug. 19, 1940 Aug. 25, 1940 Sept.12, 1940 Sept.27, 1940	6.74 12.37 5.33 5.48 5.98 4.86	2,680 11,000 1,510 1,610 2,000 1,210		July 17, 1955 Aug. 3, 1955 Aug. 6, 1955 Aug. 14, 1955 Aug. 20, 1955 Aug. 27, 1955	7.1 7.3 12.1 7.0 6.5 6.6	1,570 1,680 4,980 1,520 1,270 1,320
1941	Jan. 12, 1941	5.30	1,480	1956	June 29, 1956 July 20, 1956	10.3 6.35	3,620 1,200

a Estimated. b Annual peak only.

Peak stages and discharges of Silver Creek near Snowflake, Ariz. -- Continued Gage Gage Water Discharge Water Discharge Date height height (feet) Date year (cfs) vear (cfs) (feet) Oct. 29, 1959 Dec. 25, 1959 Jan. 11, 1960 1957 Aug. 5, 1957 7.72 1,910 1960 7.82 1,990 2,120 1,960 8.04 June 20, 1958 Aug. 4, 1958 Aug. 21, 1958 Sept. 8, 1958 1958 6.8 1,470 7.76 6.2 1,180 7.4 1961 Aug. 17, 1961 6.55 1,300 11.25 4,340 1962 Feb. 13, 1962 5.77 1.030 1959 July 5, 1959 4.97 630

3945. Little Colorado River at Woodruff, Ariz. (Published as "near Woodruff" 1916-20, 1929-48)

Location.--Lat 34°47', long 110°03', in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.17, T.16 N., R.32 E., at county bridge in Woodruff, $3\frac{3}{4}$ miles downstream from Silver Creek.

Drainage area. -- 8,100 sq mi, approximately.

<u>Gage.</u>—Recording. At site 1.5 miles downstream at datum 5.5 ft lower 1915-20.
At site 1.7 miles downstream at datum 5.5 ft lower July 4, 1929, to Sept. 21, 1949. Datum of gage is 5,130.3 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements at present site. Defined by current-meter measurements below 2,000 cfs at site in use prior 1939. Defined by current-meter measurements below 6,800 cfs and extended above on basis of slope-area measurement at 13.45 ft at site used 1939-49.

Historical data.--Flood of Jan. 19, 1916, discharge undetermined (gage height, 12.7 ft; from floodmark, datum then in use), is believed to be greater than flood of Dec. 5, 1919.

Remarks.--Peak discharges partly affected by diversions and storage. Combined capacity of all reservoirs above station, about 73,000 acre-ft, not including Lone Pine Reservoir. Base for partial-duration series, 1,900 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Jan. 19, 1916	al2.7	-	1934	-	-	ab2,500
1917	Apr. 18, 1917	5.0	a2,800	1935	Sept.28, 1935	9.3	a5,400
1919	July 19, 1919	5.4	a4,600	1936	July 10, 1936 July 25, 1936	6.32 11.0	2,170
1920	Dec. 5, 1919	12.0	a25,000	ļ	Sept.21, 1936	6.70	8,300 2,410
1929	July 21, 1929 July 26, 1929 July 29, 1929	12.45 8.05 11.6	10,700 3,320 9,050	1937	Feb. 7, 1937 July 28, 1937	9.3 6.3	5,640 2,300
	July 31, 1929 Aug. 2, 1929 Aug. 8, 1929 Aug. 13, 1929	7.0 8.25 7.45 7.65	2,180 3,600 2,590 2,810	1938	Mar. 4, 1938 Aug. 7, 1938 Aug. 8, 1938	7.10 5.92 7.20	2,880 2,070 2,960
	Sept.23, 1929	12.4	10,600	1939	Aug. 6, 1939	3.95	1,180
1930	Aug. 2, 1930 Aug. 11, 1930	7.9 11.05	3,120 8,000	1940	July 16, 1940 July 26, 1940 Aug. 15, 1940	6.50 13.45 8.5	2,670 13,000 4,540
1931	July 24, 1931 July 29, 1931 Aug. 7, 1931 Aug. 10, 1931 Aug. 22, 1931	8.3 9.2 10.90 6.5 7.45	3,680 5,000 7,750 1,920 2,660		Aug. 19, 1940 Aug. 25, 1940 Sept.12, 1940 Sept.18, 1940	6.1 5.6 8.2 5.35	2,400 2,120 4,210 2,020
	Sept. 7, 1931	7.4	2,610	1941	Jan. 12, 1941 Mar. 15, 1941	7.0 9.45	3,090 6,050
1932	Feb. 10, 1932 July 9, 1932 Aug. 20, 1932	12.1 8.6 6.3	10,200 4,350	1942	Sept.28, 1941	8.4	4,690
			1,980		Oct. 3, 1941	4.70	1,670
1933	July 7, 1933 July 24, 1933 Aug. 6, 1933	7.1 8.2 6.6	2,640 3,810 2,280	1943	Aug. 2, 1943 Aug. 31, 1943	5.2 7.46	1,920 3,590
, 1	Sept.11, 1933	11.0	8,300	1944	Sept.28, 1944	3.70	1,140
	nual peaks only. timated.						

Peak stages and discharges of Little Colorado River at Woodruff, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	July 23, 1945 July 29, 1945 Aug. 11, 1945 Aug. 20, 1945	8.42 5.71 7.67 5.52	4,690 2,170 3,810 2,070	1954	July 21, 1954 July 24, 1954 Sept. 2, 1954 Sept. 5, 1954	9.88 11.9 14.9 12.9	2,080 3,260 5,230 3,900
1946	July 22, 1946 Aug. 5, 1946 Sept.19, 1946	5.60 6.52 7.8	1,990 2,580 3,880	1955	June 14, 1955 Aug. 4, 1955 Aug. 6, 1955 Aug. 8, 1955	12.44 9.78 17.2 13.4	3,580 2,030 6,630 4,360
1947	Aug. 5, 1947 Aug. 10, 1947 Aug. 13, 1947 Aug. 23, 1947	6.90 5.63 6.10 7.56	3,000 2,160 2,440 3,700		Aug. 15, 1955 Aug. 20, 1955 Aug. 27, 1955	9.61 12.1 9.52	2,030 3,450 1,920
	Aug. 29, 1947	8.26	4,560	1956	June 30, 1956	10.20	2,250
1948	Oct. 14, 1947 Sept.27, 1948	8.30 9.76	4,560 1,920	1957	Aug. 6, 1957 Aug. 26, 1957	13.95 12.65	4,100 3,320
1949	Jan. 14, 1949 July 20, 1949 Aug. 8, 1949	10.1 9.9 13.1	2,600 2,400 7,540	1958	Aug. 15, 1958 Aug. 22, 1958 Sept. 9, 1958	10.96 13.90 11.80	2,360 3,950 2,820
1950	July 19, 1950	9.85	2,050	1959	Aug. 19, 1959	7.15	566
1951 1952	Aug. 28, 1951 Dec. 31, 1951	19.75	8,290 2,580	1960	Oct. 30, 1959 Dec. 25, 1959 Jan. 12, 1960	14.68 9.98 10.85	4,750 1,960 2,400
	Jan. 14, 1952 Jan. 19, 1952 July 6, 1952 Aug. 20, 1952 Sept.22, 1952	13.84 21.9 10.42 11.45 13.93	4,180 10,200 2,250 2,950 4,440	1961 1962	Aug. 17, 1961 Feb. 13, 1962	8.90 7.91	1,420 996
1953	July 29, 1953	11.32	2,770				

3954. Puerco River tributary near Fort Wingate, N. Mex.

Location.--Lat 35°25'55", long 108°33'30", on right bank, 0.5 mile downstream from culvert on secondary road between Fort Wingate and McGaffey, and 3 miles south of Fort Wingate.

Drainage area. -- 14.5 sq mi.

Gage. -- Crest-stage gage. Altitude of gage is 7,380 ft (from topographic map).

Stage-discharge relation.--Defined by one current-meter measurement at gage height 0.12 ft, and two indirect measurements at gage heights 1.38 ft (1.76 ft from outside high-water marks) and 4.2 ft (outside high-water marks).

Remarks. -- There are no known diversions above gage. Only annual peaks are shown.

			reak stages a	ina arser	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949 1953 1954 1955	- July 1954 July 17, 1955	0.10 .67 .28	1,360 10 117 32	1957 1958 1959 1960	Aug. 25, 1957 Sept. 7, 1958 Oct. 31, 1959	1.38 .94 .20 1.25	384 200 al 322
1956	July 1956	.10	a.3	1961 1962	August 1961	.48 .69	69 122

a About.

3955. Puerco River at Gallup, N. Mex.

Location. --Lat 35°32', long 108°44', in SW1\widthight\frac{1}{4}\text{sec.15, T.15 N., R.18 W., 1,500} ft upstream from Second Street Bridge in Gallup and half a mile upstream from Little Puerco Wash.

Drainage area. -- 558 sq mi.

Gage.--Recording May 1940 to July 12, 1946; crest-stage gage since 1956. Datum of gage is 6,490.36 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 3,700 cfs and extended above on basis of slope-area measurements at gage heights 7.99, 9.6, and 13.2 ft.

Remarks.--Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 1,200 cfs. Only annual peaks are shown subsequent to 1945.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1940	July 27, 1940 Sept.11, 1940 Sept.21, 1940	5.0 4.92 7.35	1,450 1,380 3,500	1945	July 23, 1945 July 30, 1945 Aug. 5, 1945 Aug. 7, 1945	5.90 6.43 5.14 5.46	2,270 2,760 1,640 1,880			
1941	July 24, 1941 Aug. 10, 1941 Sept.17, 1941 Sept.28, 1941	5.48 4.8 5.2 7.65	1,830 1,230 1,620 3,700		Aug. 9, 1945 Aug. 11, 1945 Aug. 31, 1945	4.7 5.50 4.73	1,310 1,920 1,340			
1942	Oct. 3, 1941	5.0	1,480	1956 1957 1958	July 31, 1956 Aug. 20, 1957 Aug. 21, 1958	9.6 7.99	6,400 3,460 a3,000			
1943	July 21, 1943 July 31, 1943 Aug. 10, 1943 Aug. 25, 1943	4.66 5.75 4.47 5.08	1,260 2,280 1,270 1,720	1959 1960	Aug. 6, 1959	13.2	9,820 340			
1944	Sept.27, 1944	4.30	1,720	1962	August 1961	7.10 4.00	3,500 860			

a Estimated.

3956. Puerco River tributary near Gamerco, N. Mex.

<u>Location</u>.--Lat 35°38', long 108°47', in $SE_{\mu}^{1}NE_{\mu}^{1}$ sec.7, T.16 N., R.18 W., upstream from abandoned culvert on former U.S. Highway 666, 0.5 mile north of junction of U.S. Highways 666 and State Highway 68, 4.5 miles north of Gamerco, and 8 miles north of Gallup.

Drainage area .-- 0.42 sq mi.

Gage. -- Crest-stage gage. Altitude of gage is 6,600 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 4.0 cfs and extended above on a basis of two indirect measurements at gage heights of 2.95 ft and 6.50 ft, from outside high-water marks.

Remarks. -- There are no known diversions above gage. Only annual peaks are shown.

Peak stages and discharges Gage Gage Discharge Discharge Water Water Date Date height height (cfs) year (cfs) vear (feet) (feet) 1951 2.95 1.00 74 1957 Aug. 20, 1957 199 1952 a22 156 1958 Aug. 17, 1958 Aug. S, 1959 6.50 437 2,30 1953 1959 .53 45 1954 July 22, 1954 July 1955 1.43 100 1960 Oct. 1, 1959 . 69 55 1955 .03 14 1961 July 1961 2.65 178 1956 July 1956 .00 12 1962 .54 46 a Estimated.

3965. Puerco River near Adamana. Ariz.

<u>Location</u>.--Lat 34°58'45", long 109°47'40", in NE $\frac{1}{4}$ sec.9, T.18 N., R.24 E., at bridge on State Highway 63 in Petrified Forest National Monument, a quarter of a mile downstream from Dead Wash and $1\frac{1}{2}$ miles east of Adamana.

Drainage area. -- 2,760 sq mi, approximately.

Gage. -- Recording. Datum of gage is 5,312.92 ft above mean sea level, datum of

Stage-discharge relation. -- Defined by current-meter measurements below 17,000 cfs and extended above by logarithmic plotting. Relation affected by very

Remarks . -- Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 3,000 cfs.

	Peak stages and discharges									
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1940	Aug. 14, 1940 Aug. 21, 1940	5.85 .5.37	7,000 5,200	1945	July 30, 1945	6.98	4,150			
	Aug. 23, 1940	5.9	7,500	1946	Aug. 10, 1946 Aug. 12, 1946	7.40 10.4	7,970 30,000			
1941	Jan. 11, 1941 Mar. 15, 1941 May 24, 1941 Aug. 8, 1941 Aug. 10, 1941 Aug. 14, 1941 Aug. 17, 1941 Sept.29, 1941	5.27 7.1 7.9 6.48 6.5 6.08 6.18 9.5	5,960 7,400 11,400 4,650 4,650 3,090 3,250 22,600	1947	Aug. 10, 1947 Aug. 13, 1947 Aug. 22, 1947 Aug. 30, 1947 Sept. 9, 1947 Oct. 14, 1947 July 28, 1948	8.6 5.6 5.7 7.7 5.95 7.3	22,000 7,500 8,440 15,800 6,420 17,100 7,060			
1942	Oct. 4, 1941 Oct. 14, 1941	9.1 7.4	19,400 8,780	1949	Sept.26, 1948	5.6	4,020			
1943	Aug. 28, 1943 Sept.26, 1943	6.53 6.8	4,530 4,800	1949	Feb. 24, 1949 July 24, 1949 Aug. 3, 1949 Aug. 8, 1949	5.11 5.95 5.75 6.9	3,010 3,710 3,120 8,040			
1944	Sept.26, 1944	7.2	4,700		Sept.13, 1949	6.25	4,700			
1945	Feb. 3, 1945	7.40	5,740		1					

3970. Little Colorado River at Holbrook, Ariz.

Location. --Lat 34°53'50", long 110°09'40", in $SW_u^1SW_u^1$ sec.6, T.17 N., R.21 E., at bridge on U.S. Highway 260 at Holbrook, $2\frac{1}{2}$ miles downstream from Puerco River.

Drainage area. -- 11,300 sq mi, approximately.

Gage.--Nonrecording 1905-9 at former highway bridge just upstream from present bridge at different datum. Recording at present site and datum since Sept. 14, 1949. Datum of gage is 5,062.87 ft above mean sea level, datum of

Stage-discharge relation.--Defined by current-meter measurements since 1950.

Relation in use during 1906 water year was apparently defined below about 3.500 cfs.

<u>Historical data.</u>--Flood peak of 60,000 cfs Sept. 19, 1923, was computed from cross section and slope of water surface by Corps of Engineers, whose studies indicate that this was probably the greatest flood since 1870.

Remarks.--Peak discharges partly affected by diversions and storage. Base for partial-duration series, 3,000 cfs.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Nov. 27, 1905	<u> </u>	a20,200	1951	Aug. 28, 1951	8.80	8,700
1923	Sept.19, 1923	-	ъ60,000	1952	Dec. 31, 1951 Jan. 14, 1952	6.80 7.55	3,190 4,700
1950	July 19, 1950	7.68	2,960		Jan. 19, 1952	8.70	8,400
a Ma	ximum daily.	b Annual	peak only.				

Peak stages and discharges of Little Colorado River at Holbrook, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	July 6, 1952 Aug. 20, 1952	6.98 6.95	3,120 3,040	1956	Aug. 1, 1956	7.20	3,390
	Aug. 28, 1952	8.00	6,000	1957	July 27, 1957	7.55	5,260
	Sept.22, 1952	7.45	4,400		Aug. 5, 1957 Aug. 24, 1957	10.96 7,71	21,800 6,370
1953	July 29, 1953	7.53	6,030		Aug. 25, 1957	8.06	8,750
					Aug. 30, 1957	7.65	6,330
1954	July 22, 1954 Aug. 20, 1954	8.60 6.95	10,800 3,620	1958	Oct. 12, 1957	8.10	4,580
	Sept. 2, 1954	7.60	5,540		Aug. 18, 1958	7.85	3,800
	Sept. 5, 1954 Sept.24, 1954	7.58 8.20	5,360 8,630		Aug. 22, 1958 Sept.14, 1958	8.57 8.85	5,630 7,000
	DCPC,24, 1304	0.20	0,000		Depo.11, 1500	0.00	,,,,,,
1955	June 12, 1955	8.36	8,900	1959	Aug. 2, 1959	8.18	3,750
	July 21, 1955	6.92	3,560		Aug. 6, 1959 Aug. 7, 1959	8.95 8.85	6,300 5,880
	Aug. 5, 1955 Aug. 7, 1955	7.40 8.35	4,200 9,420		Aug. 9, 1959	8.95	6,300
	Aug. 13, 1955	7.26	4,360		Aug. 19, 1959	8.72	5,420
	Aug. 17, 1955	8.5	10,500	l .	Aug. 19, 1959	8.80	5,700
	Aug. 20, 1955	7.13	3,620		0 5 00 3050	0.50	33.400
	Aug. 24, 1955	7.38	4,280	1960	Oct. 29, 1959	9.50	11,400
	Aug. 28, 1955	7.35	5,240	1961	Aug. 16, 1961	8.12	4,160
1956	June 30, 1956	7.30	4,210	1962	Oct. 31, 1961	8,27	4,010

3975. Chevelon Fork below Wildcat Canyon, near Winslow, Ariz.

Location.--Lat 34°38', long 110°43', in SW1 sec.36, T.15 N., R.15 E., three-eighths of a mile downstream from Wildcat Canyon and 25 miles south of Winslow.

Drainage area. -- 275 sq mi.

Gage.--Recording. Datum of gage is 5,905.16 ft above mean sea level, datum of 1929 (Bureau of Reclamation bench mark).

Stage-discharge relation. -- Defined by current-meter measurements below 6,300 cfs and extended above on basis of slope-area measurements at gage heights 13.7 and 18.2 ft. Relation subject to shifting at high stage.

Remarks. -- No regulation or diversions. Base for partial-duration series, 400 cfs.

Peak stages and discharges Gage Gage Discharge Water Discharge Water Date height Date height (cfs) (cfs) vear vear (feet) (feet) 5.08 1948 Mar. 31, 1948 1956 3.78 227 6, 1956 689 Mar. Apr. 5, 1948 Apr. 12, 1948 5.43 877 931 1957 Jan. 9, 1957 13.74 11,300 Jan. 10, 1957 Feb. 15, 1957 Feb. 19, 1957 11.43 7,540 1949 Dec. 23, 1948 5.34 808 5.41 860 Dec. 28, 1948 5.02 614 5.39 850 Mar. 8, 1945 Mar. 20, 1949 4.72 493 Feb. 24, 1957 5.11 712 6.08 1,210 Mar. 11, 1957 4.62 509 6.23 1,290 Mar. 22, 1958 Mar. 28, 1958 7.6 2,500 1958 1950 Feb. 8, 1950 Feb. 28, 1950 4.73 524 4.60 494 5.08 726 Apr. 17, 1958 Sept.13, 1958 5.86 1,110 4.92 623 May 4, 1951 Aug. 29, 1951 Sept.25, 1958 Sept.28, 1958 6.10 9.00 1,260 1951 May 4.97 618 8,940 4,080 13.7 1952 Dec. 31, 1951 Jan. 18, 1952 10.3 4,710 1959 Oct. 6, 1958 4.56 19,800 18.2 Nov. 3, 1959 Dec. 25, 1959 Apr. 8, 1952 Apr. 15, 1952 7.34 1960 5.57 911 7.73 4.38 6.46 6.24 1,400 2,630 415 Apr. 20, 1952 6.18 1,370 Jan. 12, 1960 Mar. 14, 1960 Mar. 22, 1960 1,460 1953 Mar. 11, 1953 4.97 653 6.25 1954 Mar. 23, 1954 11.4 7,500 1961 Apr. 4, 1961 4.58 476 5.12 Apr. 4, 1954 720 6.97 Feb. 13, 1962 1,920 1962 Mar. 29, 1955 Aug. 23, 1955 5.10 631 1962 5.98 1,190

3980. Chevelon Fork near Winslow, Ariz.

Location.--Lat 34°56', long 110°31', in $SE_u^1SW_u^1$ sec.27, T.18 N., R.17 E., 3 miles upstream from mouth and 12 miles southeast of Winslow.

<u>Drainage area.--</u> 1,010 sq mi, approximately, including some area which is probably noncontributing.

Gage.--Recording, except nonrecording Mar. 30 to July 2, 1929. At site 500 ft downstream prior to July 3, 1929. At datum 1.02 ft higher prior to Mar. 30, 1929, and at different datum Mar. 30 to July 2, 1929. Datum of gage is 4,899.5 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,000 cfs and extended above on basis of slope-area measurement at 19.8 ft.

Remarks. -- Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Jan. 19, 1916	13.0	a9,500	1941	May 4, 1941	7.15	1,530
1917	Apr. 24, 1917	5.30	al,300	1942	Apr. 6, 1942	6.52	985
1918	Mar. 13, 1918	b11	a6,200	1943	Mar. 7, 1943	6.11	932
1919	Apr. 1, 1919	5.37	al,110	1944	Mar. 11, 1943	6.82	1,330
1920	Dec. 5, 1919	12.9	a9,000	1944	Apr. 6, 1944 Apr. 13, 1944	6.87 5.90	1,180 713
1929	Apr. 4, 1929	17.8	16,100	1945	Sept.26, 1944	6.14	822
1930	Mar. 27, 1930 Apr. 7, 1930	4.87 4.70	519 502	1945	Apr. 10, 1945 Apr. 19, 1945 Aug. 4, 1945	6.50 7.30 9.03	1,060 1,460 2,620
1931	Mar. 19, 1931	4.86	548	1946	Sept.18, 1946 Sept.20, 1946	5.30 6.24	509 892
1932	Feb. 10, 1932 Mar. 2, 1932 Mar. 10, 1932 Mar. 20, 1932 Mar. 26, 1932	8.58 4.71 4.28 5.58 5.58	3,100 748 587 1,340 1,370	1947	Nov. 16, 1946 Nov. 25, 1946 Aug. 4, 1947	5.34 7.49 8.84	526 1,550 2,460
1933	May 2, 1933 July 24, 1933 Sept.20, 1933	4.44 4.82 5.41	565 643 1,060	1948	Apr. 1, 1948 Apr. 6, 1948 Apr. 13, 1948 Aug. 4, 1948	5.86 6.23 6.30 6.17	616 780 825 758
1934 or 1935	-	c8.05	d2,700	1949	Mar. 9, 1949 Mar. 21, 1949 Apr. 14, 1949	5.58 6.88 6.95	540 1,120 1,150
1936	Apr. 12, 1936 July 10, 1936	5.88 4.83	1,350 753	1950	Mar. 1, 1950	5.59	616
	July 28, 1936 Aug. 3, 1936	4.30 4.53	516 611	1951	Aug. 30, 1951	13.4	7,200
1937	Sept.10, 1936 Feb. 8, 1937 Feb. 15, 1937 Mar. 17, 1937 Apr. 3, 1937 Apr. 12, 1937 Aug. 31, 1937	5.04 6.66 5.86 5.90 4.80 5.75 4.72	1,820 1,340 1,360 738 1,320	1952 1953 1954	Dec. 31, 1951 Jan. 19, 1952 Apr. 7, 1952 Apr. 15, 1952 Apr. 21, 1952 Mar. 12, 1953	10.9 19.8 9.59 8.30 8.36 6.97	3,770 25,300 2,180 1,130 1,320 650
1938	Mar. 1, 1938 Mar. 4, 1938 Mar. 13, 1938	5.84 14.15 8.17	1,330 9,400 2,090		Mar. 23, 1954 Apr. 5, 1954 July 24, 1954	12.6 6.98 7.0	5,730 630 590
1939	Mar. 23, 1939 Apr. 5, 1939 Aug. 3, 1939	7.00 7.29 8.74	1,120 1,360 2,410	1955	June 13, 1955 July 25, 1955 Aug. 17, 1955 Aug. 23, 1955	9.20 8.52 7.87 7.66	1,800 1,280 898 870
1940	July 25, 1940 Aug. 23, 1940	7.01 6.38	1,180 8 4 5	1956	July 23, 1956	6.72	562
1941	Jan. 11, 1941 Feb. 17, 1941 Feb. 22, 1941 Mar. 3, 1941 Mar. 15, 1941 Apr. 2, 1941 Apr. 18, 1941	6.35 6.83 6.80 5.60 7.52 6.05 5.54	795 1,090 1,090 582 1,630 820 582	1957	Jan. 9, 1957 Jan. 11, 1957 Feb. 15, 1957 Feb. 19, 1957 Feb. 25, 1957 Mar. 23, 1958 Apr. 17, 1958	15.40 13.83 7.91 7.72 7.12 10.51 7.78	8,680 5,840 894 823 752 2,040 779
a Anr	Apr. 27, 1941 nual peak only.	6.36	1,030	c From f	June 20, 1958	8.32	890 discharge

a Annual peak only. b Estimated. c From floodmark. d Maximum discharg for water years 1934-35; occurred during period Feb. 6, 1934, to Sept. 23, 1935.

Peak stages and discharges of Chevelon Fork near Winslow, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Sept. 2, 1958 Sept.28, 1958	6.8 10.66	598 2,140	1960	Mar. 14, 1960 Mar. 22, 1960	8.79 8.03	1,510 1,160
1959	July 5, 1959 Aug. 14, 1959	7.42 9.31	715 1,320	1961	July 30, 1961	6.00	500
1960	Oct. 30, 1959 Dec. 26, 1959 Jan. 13, 1960	6.88 10.63 6.02	712 2,640 522	1962	Feb. 13, 1962 Apr. 8, 1962 Sept. 8, 1962	8.88 8.09 8.93	1,540 1,350 1,440

3985. Clear Creek below Willow Creek, near Winslow, Ariz.

<u>Location</u>.--Lat 34°40', long 111°00', in $NW_u^1NE_u^1$ sec.30, T.15 N., R.13 E., 2 miles downstream from Willow Creek and 30 miles southwest of Winslow.

Drainage area. -- 321 sq mi.

Gage .-- Recording. Altitude of gage is 6,000 ft (from U.S. Forest Service map).

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs and extended above on basis of area-velocity studies and logarithmic plotting.

Remarks. -- No regulation or diversion. Base for partial-duration series, 500 cfs.

Peak stages and discharges Gage Gage Discharge Discharge (cfs) Water Water Date height Date height (cfs) year year (feet) (feet) 636 9.54 1948 Apr. 12, 1948 1.810 1955 Aug. 20, 1955 Aug. 24, 1955 7.07 1,120 8.31 1949 Dec. 23, 1948 1,090 8.14 Dec. 28, 1948 Mar. 8, 1949 1956 7.55 842 Mar. 26, 1956 5.17 198 Mar. 8, 1949 Mar. 20, 1949 Apr. 15, 1949 7.34 766 Jan. 9, 1957 Jan. 10, 1957 Feb. 15, 1957 6,960 1,520 9.0 1957 14.90 9.75 16.25 8.30 8.54 1,990 8,880 1,180 1,270 1950 Feb. 8, 1950 Feb. 28, 1950 6.80 594 Feb. 24, 1957 Mar. 11, 1957 1.090 7.16 683 May 5, 1951 Aug. 29, 1951 1951 7.21 708 1958 10.15 2,150 Nov. 16.3 8,090 Feb. 26, 1958 7.20 11.2 652 2,920 Mar. 22, 1958 1952 Dec. 31, 1951 Jan. 18, 1952 15.2 6,730 16,400 2,180 2,580 9.18 7.65 1,560 Apr. 18, 1958 Sept. 8, 1958 Sept.13, 1958 Sept.28, 1958 21.5 830 Apr. 7, 1952 Apr. 20, 1952 Aug. 15, 1952 1,980 9.9 8.65 1,280 10.83 6.73 574 1959 Aug. 20, 1959 5.83 296 1953 Mar. 11, 1953 6.54 497 Nov. 3, 1959 Dec. 25, 1959 Mar. 10, 1960 Mar. 25, 1960 6.77 11.06 8.66 1960 534 5,730 1954 Mar. 23, 1954 12.6 2,770 Apr. 5, 1954 July 24, 1954 630 7.0 590 9.30 1,490 1,080 June 14, 1955 July 31, 1955 Aug. 3, 1955 1,220 1955 8.51 1961 Apr. 5, 1961 8.15 652 543 514 7.08 2,240 6.75 1962 Feb. 13, 1962 Apr. 9, 1962 10.29 1,650 8, 1955 6.65 9.35 Aug. Aug. 1955 6.80 558

3990. Clear Creek near Winslow, Ariz.

Location. --Lat 34°58', long 110°38', in SE¼ sec.9, T.18 N., R.16 E., at county highway bridge, 1½ miles upstream from mouth and 5 miles southeast of Winslow. Control for station is crest of diversion dam 1,200 ft downstream.

Drainage area .-- 607 sq mi.

Gage.--Nonrecording prior to July 3, 1929; recording thereafter. At datum 4.03 ft higher prior to July 10, 1931. Datum of gage is 4,861.32 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 13,500 cfs; extended above on basis of velocity-area studies and slope-area measurement at gage height 13.4 ft. Rating stabilized by diversion dam 1,200 ft downstream.

Historical data.--Floodmarks 3 ft higher than the stage of the flood of Apr. 4, 1929, were observed 1,850 ft downstream from gage in 1929.

Remarks. -- Peak discharges not affected by small diversions. Base for partial-duration series, 500 cfs. Peak stages and discharges

Gage Gage Water Discharge Water Discharge Date height Date height (cfs) (cfs) vear year (feet) (feet) a18.1 1929 ъ50,000 2, 1941 Apr. 4, 1929 1941 Apr. 6.30 1,050 Apr. 13, 1941 Apr. 18, 1941 Apr. 27, 1941 May 5, 1941 6.31 6.34 6.95 1,060 1.83 1930 Mar. 27, 1930 Apr. 10, 1930 507 1,100 1,080 2.28 1,920 6.96 1931 Mar. 24, 1931 850 Apr. 4, 1931 Apr. 30, 1931 1.85 2.04 532 1942 Apr. 6, 1942 6.97 1,940 740 6.35 1943 Mar. 7, 1943 Mar. 11, 1943 Mar. 30, 1943 1,130 1,500 Aug. 30, 5.93 1931 581 6.64 1932 Feb. 10, 1932 9.08 6,100 5.88 606 Mar. 3, 1932 Mar. 10, 1932 6.15 826 6.07 718 1944 Mar. 27, 1944 5.84 506 Apr. 8, 1944 Apr. 17, 1944 Mar. 20, 1932 6.96 2,080 6.71 1,500 Apr. 2, Apr. 16, 2, 1932 6.98 2,120 6.42 1,120 1,360 Apr. 28, 1944 May 4, 1944 May 12, 1944 1932 6.50 6.28 948 6.44 1,140 1933 Mar. 30, 1933 5.86 577 871 Apr. 5, 1933 May 4, 1933 6.06 5.92 780 Apr. 3, 1945 Apr. 10, 1945 Apr. 22, 1945 635 1945 5.80 July 31, 1933 5.83 548 6.42 7.14 1,180 2,230 1934 9.15 6.300 Apr. 9, 1946 July 22, 1946 Sept.20, 1946 6.03 1946 or 1935 5.81 540 6.34 1,100 1936 Apr. 14, 1936 6.71 1,680 Nov. 16, 1946 Nov. 25, 1946 Dec. 29, 1946 Aug. 13, 1947 Sept.19, 1947 6.01 736 1947 2,580 Feb. 7.39 1,740 1937 8, 1937 6.83 2,290 2,100 2,790 1,000 Feb. 16, 1937 5.87 596 7.14 7.03 Mar. 14, 1937 6.34 1,100 Mar. 17, 1937 5.99 7.43 Apr. 4, 1937 Apr. 16, 1937 6.26 7.00 5.94 Apr. 1, 1948 Apr. 13, 1948 2,050 1948 1,810 6.90 1938 Mar. 4, 1938 Mar. 13, 1938 14.3 26,200 Dec. 29, 1948 Mar. 9, 1949 Mar. 21, 1949 Mar. 30, 1949 Apr. 16, 1949 2,300 6.02 705 7.14 1949 710 1939 Mar. 23, 1939 Apr. 4, 1939 6.45 1,260 6.52 1,270 6.62 1,500 550 7.00 1,970 Aug. 15, 1940 1.840 1940 6.85 1,000 1950 Mar. 1, 1950 July 7, 1950 6.30 5.95 1940 1941 6.12 852 Oct. 558 Dec. 13, 1940 5.83 May 6, 1951 Aug. 30, 1951 647 Dec. 19, 1940 5.82 549 1951 May 5.96 Feb. 13, 1941 5.81 540 8,530 9.95 Feb. 17, 1941 6.57 1,380 7,940 22,500 2,580 1952 9.57 Feb. 22, 1941 6.87 Dec. 31, 1951

1,800

1,090

3,300

Jan. 19, 1952 Apr. 8, 1952

Apr.

13.4 7.14

6.33 7.73

Mar. 3, 1941 Mar. 15, 1941

a Present datum

b Annual peak only.

Peak stages and discharges of Clear Creek near Winslow, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Apr. 21, 1952 May 5, 1952	7.38 6.05	3,030 980	1957	July 17, 1957	5.79	810
		i		1958	Nov. 5, 1957	6.00	1,020
1953	Mar. 27, 1953	5.80	524	l	Feb. 27, 1958	5.57	592
	Aug. 27, 1953	6.03	695	l	Mar. 23, 1958	7.34	2,920
	1	1		l	Apr. 19, 1958	6.37	1,420
1954	Mar. 24, 1954	8.64	5,800	li .	Sept.14, 1958	7.08	899
	Apr. 7, 1954	5.78	811		Sept.28, 1958	7.26	1,100
1955	Aug. 21, 1955	5.57	560	1959	Oct. 1, 1958	6,68	542
	Aug. 25, 1955	6.05	1,080				
				1960	Dec. 26, 1959	8.19	2,440
1956	Mar. 27, 1956	5.05	173	l	Mar. 15, 1960	7.24	1,190
					Mar. 26, 1960	7.47	1,420
1957	Jan. 9, 1957	8.97	6,620				
	Jan. 11, 1957	9.83	9,150	1961	Apr. 6, 1961	6.99	925
	Feb. 16, 1957	6.00	1,020	1			
	Feb. 25, 1957	6.10	1,130	1962	Feb. 13, 1962	8.05	2,330
	Mar. 12, 1957	5.57	601	1	Apr. 11, 1962	7.66	1,770

4010. Little Colorado River at Grand Falls, Ariz.

<u>Location</u>.--Lat 35°26', long ll1°12', in T.24 N., R.11 E. (unsurveyed), 1,000 ft downstream from Grand Falls on Navajo Indian Reservation, $4\frac{1}{2}$ miles upstream from Dinnebito Wash, 30 miles northeast of Flagstaff, and 96 miles upstream from mouth.

Drainage area. -- 21,200 sq mi, approximately.

Gage.--Nonrecording prior to Jan. 6, 1926; recording thereafter. Datum of gage is 4,438.9 ft above mean sea level, datum of 1929.

Stage-discharge relation .-- Defined by current-meter measurements.

<u>Historical data.</u>—The flood of Sept. 19, 1923, discharge about 120,000 cfs (gage height, 47.0 ft, from floodmarks), is believed by the Corps of Engineers to be the largest since 1870.

Remarks.--Peak discharges slightly affected by diversions and storage. Combined capacity of all reservoirs above station, about 73,000 acre-ft in 1953, not including Lone Pine Reservoir and Lake Mary. Base for partial-duration series, 4,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	Sept.19, 1923	47.0	120,000	1931	Aug. 1, 1931 Aug. 7, 1931	13.0 12.71	6,530 6,070
1926	Apr. 8, 1926 Sept.12, 1926 Sept.27, 1926	14.0 14.88 22.5	8,040 9,630 27,800	1932	Oct. 4, 1931 Nov. 12, 1931 Feb. 10, 1932	11.78 13.35 23.8	4,510 6,920 31,000
1927	Feb. 18, 1927 June 28, 1927 Sept. 6, 1927 Sept.12, 1927 Sept.18, 1927	14.83 22.9 13.36 16.67 14.6	9,540 28,800 6,950 13,200 9,120	1933	Mar. 3, 1932 Mar. 21, 1932 Aug. 30, 1932 July 26, 1933	12.22 11.60 12.22	5,160 5,160 4,340 5,160
1928	Feb. 7, 1928	9.50	2,140		Sept.12, 1933	13.69	7,500
1929	Nov. 2, 1928 Apr. 5, 1929 July 23, 1929	11.6 30.0 14.9	4,640 50,500 9,920	1934	Oct. 7, 1933 Aug. 29, 1934	12.05 11.9	4,920 4,720
	July 27, 1929 July 29, 1929 July 31, 1929 Aug. 5, 1929	21.5 21.1 14.95 11.65	25,200 24,100 10,000 4,760	1935	Apr. 10, 1935 Aug. 5, 1935 Aug. 25, 1935	13.6 12.70 12.45	7,350 5,870 5,500
	Aug. 9, 1929 Aug. 13, 1929	11.95 16.05	5,180 12,200	1936	Aug. 6, 1936	12.37	5,430
	Sept. 6, 1929 Sept. 24, 1929	12.84 18.0	6,490 16,500	1937	Feb. 9, 1937 Feb. 16, 1937 Mar. 18, 1937	20.25 14.17 14.24	21,800 8,580 8,400
1930	July 13, 1930 July 19, 1930 Aug. 8, 1930 Aug. 11, 1930	14.35 16.9 12.85 14.24	8,670 13,700 6,110 8,470	1938	Mar. 5, 1938 Mar. 14, 1938 Aug. 9, 1938	26.1 11.94 11.61	38,000 4,780 4,390

Peak stages and discharges of Little Colorado River at Grand Falls, Ariz .-- Continued

Water year	Date	Cage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 5, 1939	13.21	6,680	1948	Oct. 16, 1947 Aug. 6, 1948	16.27 12.42	12,400 5,460
1940	July 27, 1940 Aug. 15, 1940 Aug. 24, 1940	19.57 13.59 11.77	20,100 7,350 4,650	1949	Aug. 9, 1949	15.3	10,400
	Aug. 26, 1940 Sept.14, 1940	11.96	4,910 4,390	1950	July 18, 1950	-	3,500
	Sept.19, 1940 Sept.22, 1940	11.65 13.52	4,390 7,010	1951	Aug. 30, 1951	15.2	10,200
1941	Oct. 1, 1940 Dec. 26, 1940	11.59 12.58	4,390 5,750	1952	Jan. 1, 1952 Jan. 20, 1952 Apr. 9, 1952	14.71 21.9 11.35	9,300 26,100 4,140
	Dec. 31, 1940 Jan. 12, 1941	12.66 17.07	5,900 14,200	1953	July 31, 1953	11.45	4,140
	Feb. 22, 1941 Mar. 15, 1941 Apr. 27, 1941	12.40 18.30 12.69	5,460 17,000 5,900	1954	Mar. 25, 1954 July 25, 1954	13.54 13.54	7,450 7,450
	May 6, 1941 May 25, 1941	11.28 11.95	4,020 4,910		Sept.25, 1954	13.40	7,290
	Aug. 11, 1941 Aug. 16, 1941 Sept.30, 1941	11.72 12.67 18.0	4,520 5,650 16,000	1955	June 15, 1955 Aug. 5, 1955 Aug. 9, 1955 Aug. 18, 1955	14.4 12.9 13.5 12.9	9,020 6,190 7,130 6,490
1942	Oct. 4, 1941 Oct. 14, 1941	14.55 14.2	8,760 8,050	2050	Aug. 25, 1955	11.9	5,020
1943	Sept.28, 1943	11.23	3,900	1956 1957	Aug. 17, 1956 Jan. 11, 1957	9.62	2,320 7,080
1944	Sept.29, 1944	12.32	5,320	100.	Jan. 12, 1957 Aug. 7, 1957	14.05 12.47	8,390 5,840
1945	Aug. 12, 1945	11.80	4,650		Aug. 27, 1957	11.66	4,670
1946	July 22, 1946 Aug. 13, 1946 Sept.19, 1946	11.3 11.61 16.5	4,020 4,390 12,900	1958	Oct. 13, 1957 Mar. 24, 1958 Aug. 23, 1958 Sept.15, 1958	11.55 11.38 11.57 11.14	4,540 4,310 4,560 4,000
1947	Aug. 11, 1947 Aug. 14, 1947 Aug. 24, 1947	11.32 11.5 15.45	4,020 4,260 10,600	1959	Aug. 7, 1959	10.37	3,080
	Aug. 27, 1947 Aug. 31, 1947	11.68 13.24	4,520 6,680	1960	Nov. 1, 1959 Dec. 27, 1959	13.80 11.62	7,960 4, 630

4014. Moenkopi Wash near Tuba, Ariz. (Published as "near Tuba City" prior to 1933)

Location.--Lat 36°02', long ll1°24', in T.31 N., R.9 E. (unsurveyed), on Navajo Indian Reservation, at bridge on U.S. Highway 89, 9 miles upstream from mouth, ll miles north of Cameron, and ll miles southwest of Tuba.

<u>Drainage area.</u>--2,440 sq mi, approximately, at present site; 2,220 sq mi, approximately, at site used prior to June 23, 1941.

<u>Gage.</u>--Nonrecording prior to Aug. 18, 1929; recording thereafter. At site 8 miles upstream prior to June 23, 1941. At different datum prior to Aug. 18, 1929, and at datum 0.96 ft higher Aug. 18, 1929, to June 22, 1941. Datum of gage is 4,310.96 ft above mean sea level (from Arizona Highway Department bench mark).

Stage-discharge relation. --Defined by discharge measurements below 5,000 cfs and extended above on basis of several slope-area measurements. Relation subject to large shifts.

Remarks. -- Peak discharges unaffected by irrigation diversions. Base for partialduration series, 1,400 cfs.

Tour pages and approximation											
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Iischarge (cfs)				
1926	Sept.26, 1926	19.0	a5,260	1929	July 26, 1929	8.6	4,520				
1927	Sept.17, 1927	24.0	al2,900		July 30, 1929 Aug. 4, 1929	6.1 15.4	2,040 15,100				
1928	Aug. 26, 1928	9.0	a3,800		Sept. 4, 1929 Sept.21, 1929	12.7 9.3	10,300 5,390				
1929 a Ani	July 1s, 1929 nual peak only.	7.0	2,800	1930	July 11, 1930	7.74	3,540				

Peak stages and discharges of Moenkopi Wash near Tuba, Ariz . -- Continued

Water year	Date Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	July 12, 1930 July 13, 1930 July 19, 1930 Aug. 1, 1930 Aug. 4, 1930	10.0 13.6 8.4 7.9 12.2	6,300 11,800 4,280 3,700 9,520	1941	Oct. 5, 1940 Aug. 16, 1941 Sept.13, 1941 Sept.18, 1941	7.05 6.79 4.38 6.22	4,820 5,240 2,220 4,420
	Aug. 8, 1930 Aug. 10, 1930 Sept. 8, 1930	14.9 14.5 5.95	14,100 13,400 1,920	1942	Oct. 3, 1941 Oct. 13, 1941	7.26 8.0	5,800 7,000
1931	Sept.15, 1931	6.95	2,760	1943	Dec. 25, 1942 July 31, 1943 Aug. 10, 1943	4.44 4.67 3.84	2,370 2,500 1,700
1932	Aug. 28, 1932	9:22	5,300		Aug. 17, 1943	8.1	7,150
1933	July 7, 1933 July 9, 1933	8.48 8.10	4,380 3,920	1944	Sept.27, 1944	3,11	964
1934	Aug. 20, 1933 Oct. 3, 1933	6.06 8.5	2,010 4,400	1945	July 23, 1945 July 31, 1945 Aug. 1, 1945	7.18 7.20 7.60	5,640 5,640 6,290
	Oct. 5, 1933 Oct. 9, 1933 Oct. 11, 1933 Aug. 8, 1934	5.26 5.28 7.18 5.7	1,410 1,430 2,980 1,740		Aug. 8, 1945 Aug. 12, 1945 Aug. 18, 1945	3.99 4.70 4.40	1,700 2,370 2,070
1935	Aug. 28, 1934 Aug. 25, 1935 Sept. 1, 1935	12.85 4.96 5.08	14,500 2,160 2,320	1946	Dec. 23, 1945 July 20, 1946 Aug. 12, 1946	4.10 4.10 6.03 4.53	1,790 1,790 3,910
1936	Aug. 1, 1936 Aug. 4, 1936 Aug. 6, 1936 Aug. 30, 1936 Sept. 2, 1936	4.49 8.5 - 8.9 10.5	1,690 7,230 b2,500 7,940 11,000	1947	Aug. 28, 1946 Aug. 14, 1947 Aug. 17, 1947 Aug. 21, 1947	4.11 5.15 4.55	2,220 1,790 2,860 2,220
	Sept.13, 1936 Sept.22, 1936	4.72 6.42	1,890 3,960	1948	Oct. 13, 1947 June 2, 1948	8.0 3.82	6,980 1,520
1937	July 9, 1937 July 12, 1937 July 28, 1937	6.5 5.42 5.8	4,100 2,660 3,150		July 25, 1948 Aug. 5, 1948	3.68 4.45	1,440 2,120
	Sept. 2, 1937 Sept.30, 1937	9.0 8.4	8,120 7,060	1949	Aug. 9, 1949 Oct. 19, 1949	4.78 5.55	2,210 2,480
1938	Aug. 9, 1938 Aug. 31, 1938 Sept. 4, 1938	4.47 6.0 7.3	1,640 3,410 5,270	1000	July 25, 1950 Aug. 5, 1950 Sept.20, 1950	6.0 4.6 5.0	2,890 1,500 1,500
1939	Sept.11, 1939	8.30	6,890	1951	Sept.30, 1951	8.5	5,000
1940	Aug. 22, 1940 Aug. 24, 1940 Sept.14, 1940 Sept.17, 1940	4.68 5.62 6.74 5.34	1,890 2,900 4,380 2,600	1952	Oct. 1, 1951 Aug. 28, 1952 Sept.21, 1952	4.79 7.4 12.3	1,430 3,530 10,000
	Sept.23, 1940 Sept.28, 1940 Sept.30, 1940	7.7 4 6.27 8.7	5,7 4 0 3,820 7,580	1953	July 18, 1953 July 30, 1953 Aug. 28, 1953	8.30 9.35 6.15	3,550 5,700 2,250

b Estimated.

4015. Moenkopi Wash near Cameron, Ariz.

Location. --Lat 35°55'30", long 111°25'15", in SW1 sec.3, T.29 N., R.9 E., on Navajo Indian Reservation, 3 miles upstream from mouth, 31 miles north of Cameron, and 6 miles downstream from bridge on U.S. Highway 89.

Drainage area. -- 2,590 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 4,161.5 ft above mean sea level, datum of 1929.

Stage-discharge relation. --Defined by current-meter measurements below 800 cfs and extended above on basis of slope-area measurement at gage height 12.6 ft and high-water rating at former station near. Tuba.

Remarks. -- Diversions above station for irrigation of about 2,500 acres do not materially affect peak flows. Base for partial-duration series, 1,400 cfs.

Peak stages and discharges of Moenkopi Wash near Cameron, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	July 22, 1954 Aug. 5, 1954 Sept.23, 1954	9.7 8.8 15.6	2,990 2,400 7,440	1958	Oct. 18, 1957 Aug. 8, 1958 Aug. 22, 1958 Sept. 2, 1958	7.47 9.25 8.60 7.82	1,460 2,600 2,140 1,650
1955	June 13, 1955 July 17, 1955 July 26, 1955	8.1 9.6 11.8	1,860 2,780 4,460	1959	Aug. 5, 1959	11.24	4,160
	July 27, 1955 Aug. 5, 1955 Aug. 13, 1955	9.8 12.6 10.4	3,060 5,020 3,480	1960 1961	Sept. 1, 1960	4.47	277
1956	Aug. 13, 1955 Aug. 17, 1956	10.4	3,480	1962	Sept. 9, 1961 Sept. 20, 1962	9.52 8.35	2,470 1,970
1957	Aug. 25, 1957	9.95	2,910		Sept.26, 1962 Sept.29, 1962	10.05 8.24	3,220 1,900

4020. Little Colorado River near Cameron, Ariz.

Location.--Lat $35^{\circ}56^{\circ}$, long lll°34' (unsurveyed), in Navajo Indian Reservation, 3 miles downstream from Coconino damsite, $9\frac{1}{2}$ miles downstream from Moenkopi Wash, $9\frac{1}{2}$ miles northwest of Cameron, and 45.5 miles upstream from mouth.

Drainage area. -- 26,500 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 3,979.2 ft above mean sea level, datum of 1929.

 $\frac{Stage-discharge\ relation.--Defined\ by\ current-meter\ measurements\ below\ 17,000}{cfs\ and\ extended\ above}.$

Remarks.--Peak discharges unaffected by diversions and storage. Base for partial-duration series, 4,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1947	Aug. 9, 1947	19.60	21,900	1955	Aug. 9, 1955 Aug. 13, 1955	10.9 11.4	6,930 7,640
1948	Oct. 14, 1947	17.9	18,600	}	Aug. 18, 1955	10.3	6,100
	Oct. 16, 1947	14.5	12,600		Aug. 25, 1955	9.56	5,190
	Aug. 6, 1945	9.93	5,580	1		}	1
				1956	Aug. 17, 1956	10.65	6,650
1949	Aug. 9, 1949	14.35	12,400	3057	7- 12 1055	30.01	
1950	July 18, 1950	8.93	4.340	1957	Jan. 11, 1957	10.64 11.42	6,850
1300	July 15, 1950	0.93	4,340	i	Jan. 12, 1957 Aug. 7, 1957	10.35	8,060 6,290
1951	July 29, 1951	8.7	4,100		Aug. 25, 1957	10.32	6,060
	Aug. 30, 1951	14.0	11,700		Aug. 25, 1957	9.06	4,410
	Sept.30, 1951	8.96	4,460	l	Aug. 26, 1957	9.30	4,860
3.050					Aug. 27, 1957	10.22	6,260
1952	Jan. 2, 1952 Jan. 21, 1952	12.45 20.7	9,140	1958	0-1 74 7057		
	Apr. 9, 1952	8.62	24,900 4,100	1958	Oct. 14, 1957 Mar. 24, 1958	9.17 8.59	4,540 4,240
	Sept.21, 1952	18.7	20,100		Aug. 24, 1958	8.88	4,590
	p	2011	20,100		Sept.28, 1958	8.65	4,310
1953	July 30, 1953	10.3	6,230	Į			.,
			1	1959	Aug. 5, 1959	8.93	4,180
1954	Mar. 25, 1954	11.00	7,070	l)	Aug. 7, 1959	9,30	4,600
	July 25, 1954 Sept.23, 1954	11.00 10.04	7,070	1960	N 0 3050	30.63	2 200
	Sept.25, 1954 Sept.25, 1954	10.04	5,710 6,930	1390	Nov. 2, 1959 Dec. 28, 1959	10.67 S.86	6,620 4,330
	DCP0.20, 1304	10.52	0,930		Dec. 20, 1909	3.00	4,550
1955	June 13, 1955	12.3	8,990	1961	Sept. 9, 1961	7.03	2,600
	June 15, 1955	11.9	8,390			1	
	July 26, 1955	9.7	5,320	1962	Feb. 17, 1962	7.94	3,470
	Aug. 5, 1955	12.1	8,690	L		L	L

4025. Colorado River near Grand Canyon, Ariz. (Published as "at Bright Angel Creek, near Grand Canyon" prior to 1944)

Location.--Lat 36°05'55", long 112°05'30", a quarter of a mile upstream from Bright Angel Creek, 11 miles by trail northeast of Grand Canyon, Coconino County, 26 miles downstream from Little Colorado River, and 267 miles upstream from Hoover Dam.

Drainage area. -- 137,800 sq mi, approximately.

Gage. -- Nonrecording prior to Dec. 9, 1922; recording thereafter, supplemented by recording gage 400 ft upstream used for lower stages since Oct. 1, 1934. Datum of both gages is 2,418.7 ft above mean sea level, preliminary datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 120,000 cfs and extended above by logarithmic plotting.

 $\frac{\rm Historical~data}{300,000~\rm cfs}$ on basis of flood studies at Lees Ferry.

Remarks.--Peak discharges slightly affected by transmountain diversions, irrigation diversions, storage reservoirs, and return flow from irrigated areas. Base for partial-duration series, 35,000 cfs.

Peak stages and discharges Gage Gage Discharge Discharge Water Water Date height Date height year year (cfs) (cfs) (feet) (feet) 1884 July 8, 1884 1931 May 22, 1931 14.36 34,600 ab300.000 Feb. 11, 1932 1921 June 19, 1921 37.5 b220.000 1932 18.30 53,800 Apr. 23, 1932 15.82 41,200 102,000 June 1, 1922 26, 1932 1922 abl15,000 May 26.1 June 29, 1932 22.1 16.70 72,900 42,400 54,900 73,600 98,600 36,800 July 14, 1932 Aug. 30, 1932 1923 15, 1923 22.47 Mav May 31, 1923 Aug. 15, 1923 Sept.19, 1923 26.45 15.5 19.07 1933 5, 1933 81,500 28.5 112,000 June 23,41 July 9, 1933 15,26 35,400 Nov. 12, 1923 1924 16.3 41,400 Dec. 28, 1923 Apr. 18, 1924 Apr. 27, 1924 19.37 17.42 57,000 46,900 38,400 1934 May 17, 1934 12.32 25,500 15.65 1935 June 19, 1935 26.82 105,000 May 23, 1924 June 18, 1924 21.0 66,200 21.55 22.4 74,000 1936 May 9, 1936 68,300 24, 1936 7, 1936 22.64 16.03 May 76,300 June 3, 1925 June 25, 1925 Sept. 5, 1925 1925 18.75 53,700 36,400 Aug. 18.42 15.44 52,000 38,600 1937 Apr. 20, 1937 May 21, 1937 46,200 85,300 23.90 Oct. 7, 1925 9, 1926 1026 15.20 37,800 June 3, 1937 21.08 66,300 May 9, 1926 May 29, 1926 July 14, 1926 22.17 74,000 54,500 70,900 72,100 1938 19.85 24.27 5, 1938 85,600 38,800 Mar. 4, 1938 22.20 15.80 May Sept.27, 1926 May 22, 1938 8, 1938 22.12 16.07 40,100 100,000 26.38 1927 20.8 65,200 46,200 92,900 73,400 10, 1939 17.75 Mar. 23, 1927 24.5 1939 Mav May 26, 1939 June 9, 1939 June 22, 1927 22.23 18.07 49,000 16.78 July 2, 1927 Sept.11, 1927 Sept.15, 1927 127,000 29.25 21.20 67,200 28.9 124,000 1940 May 18, 1940 June 6, 1940 17.66 46,800 16.60 42,200 1928 May 14, 1928 June 3, 1928 88,900 27.85 115,000 1941 May 17, 1941 June 23, 1941 28.86 120,000 76,600 22.98 1929 Mar. 14, 1929 15.65 37,600 Oct. 16, 1941 Oct. 28, 1941 6, 1929 64,900 43,700 111,000 1942 24.75 88,700 Apr. 6, 1929 Apr. 23, 1929 21.1 16.92 42,000 16.55 May 29, 1929 27.5 Apr. 9, 1942 Apr. 18, 1942 19.25 53,800 25.9 67,600 June 13, 1929 98,800 21.65 Apr. 26, 1942 July 30, 1929 21.0 64,300 21.9 69,800 20.90 25.18 Aug. 7, 1929 21.8 69,100 May 15, 1942 31, 1942 63,700 91,800 Aug. 13, 1929 Sept.10, 1929 Sept.24, 1929 21.9 17.15 19.7 69,800 May 45,400 57,300 1943 May 8, 1943 June 6, 1943 20.70 58,500 21.39 66,800 Apr. 18, 1930 Apr. 29, 1930 June 4, 1930 1930 16.08 41,700 25.1 45,800 71,000 93.400 1944 May 20, 1944 16.94 21.6 June 16, 1930 Aug. 12, 1930 21.40 63,300 52,900 20.35 1945 May 17, 1945 May 31, 1945 63,200 60,500 19.25 19.9 11

a Estimated on basis of records for station at Lees Ferry.

b Annual peak only.

Peak stages and discharges of Colorado River near Grand Canyon, Ariz. -- Contirued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 11, 1945 June 18, 1945	19.65 19.5	54,900 54,100	1954	May 27, 1954	15.05	32,800
]	J	1955	June 14, 1955	16.9	40,400
1946	May 3, 1946 June 14, 1946	16.30 18.65	39,400 50,100	1956	May 12, 1956 June 6, 1956	15,85 21,6	38,300 67,200
1947	May 14, 1947 June 13, 1947 June 25, 1947 Aug. 19, 1947 Aug. 25, 1947	23.10 21.50 22.1 15.7 20.22	80,100 65,700 69,400 36,600 58,600	1957	May 14, 1957 June 13, 1957 July 30, 1957 Aug. 8, 1957 Sept. 2, 1957	20.55 29.1 21.0 18.65 19.3	61,900 125,000 64,300 51,000 54,500
1948	Oct. 15, 1947 Apr. 25, 1948 May 11, 1948 May 26, 1948	18.7 19.00 18.00 24.90	49,300 54,500 48,600 89,800	1958	Oct. 23, 1957 Nov. 5, 1957 Apr. 25, 1958 June 2, 1958	15.73 17.35 19.80 26.97	40,500 45,800 58,500 107,700
1949	May 3, 1949 June 22, 1949	18.55 27.95	50,800 112,000	1959	June 19, 1959	16.11	38,300
1950	Apr. 28, 1950 June 6, 1950 July 10, 1950	15.92 20.55 16.40	37,000 58,400 40,500	1960	Apr. 16, 1960 May 20, 1960 June 10, 1960	16.55 17.02 17.95	40,600 42,300 46,300
1951	June 1, 1951 June 25, 1951	21.00 20.05	63,700 59,000	1961	June 6, 1961	16.38	39,800
1952	Jan. 21, 1952 May 9, 1952 June 12, 1952	16.75 27.7 29.05	40,100 110,000 122,000	1962	Feb. 18, 1962 Apr. 2, 1962 May 2, 1962 May 17, 1962 June 18, 1962	15.35 15.45 21.25 23.80 19.23	35,000 38,400 69,700 85,600 56,800
1953	June 17, 1953	21.80	68,500		June 10, 1962	13.23	36,600

BRIGHT ANGEL CREEK BASIN

4030. Bright Angel Creek near Grand Canyon, Ariz.

<u>Location</u>.--Lat $36\,^\circ 05\,^! 55''$, long $112\,^\circ 05\,^! 40''$, 1,000 ft upstream from mouth and 11 miles by trail from Grand Canyon, Coconino County.

Drainage area. -- 98.4 sq mi.

Gage. --Nonrecording Oct. 20, 1923, to Jan. 29, 1933, at site 200 ft upstream at several different datums. Recording Jan. 30, 1933, to Aug. 19, 1936, at site 200 ft upstream at datum 4.5 ft higher. Nonrecording Aug. 25, 1936, to Apr. 21, 1943, at several sites from 300 ft downstream to 2,200 ft upstream at different datums. Recording at present site and datum since Apr. 22, 1943. Datum of gage is 2,452.1 ft above mean sea level, preliminary datum of 1929.

Remarks.--Peak discharges not affected by small irrigation diversions. Base for partial-duration series, 130 cfs.

reak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1924	July 3, 1924 Sept.10, 1924	2.6 4.7	220 530	1927	Sept.16, 1927	6.0	1,000		
1925	Sept.17, 1925	1.85	122	1928	Mar. 28, 1928 May 3, 1928	1.50 1.75	150 187		
1926	Apr. 8, 1926 Apr. 29, 1926 May 5, 1926 July 27, 1926	2.50 2.75 2.9 6.5	228 266 290 1,000	1929	May 6, 1929 July 10, 1929 Sept. 8, 1929	1.5 1.7 1.65	135 173 154		
1927	Feb. 16, 1927	3.6	450	1930	Feb. 23, 1930	1.25	113		
	Feb. 27, 1927 Apr. 29, 1927	2.5 2.84	217 421	1931	June 25, 1931	.70	45		
	May 16, 1927 Aug. 4, 1927	2.20 2.4	175 208	1932	Feb. 9, 1932 Apr. 19, 1932	3.5 3.15	500 352		

Peak stages and discharges of Bright Angel Creek near Grand Canyon, Ariz. -- Continued

Peak	stages and disch	arges of	Bright Angel	Creek ne	ar Grand Canyon,	ArizC	ontinued
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 13, 1932	3.30	386	1946	Apr. 7, 1946	1.70	133
1933	Aug. 7, 1933	4.26	186		Apr. 24, 1946 July 19, 1946	1.81 1.82	159 172
	Aug. 17, 1933	4.25	184		July 22, 1946	4.50	840
1934	Oct. 9, 1933	4.95	250		Aug. 14, 1946 Sept.30, 1946	2.22 2.55	207
	000. 3, 1333	4.33	230	1	Sept.30, 1946	2.55	178
1935	Apr. 23, 1935	4.81	241	1947	Aug. 8, 1947	3.06	290
	May 26, 1935	4.80 4.39	241 175		Aug. 11, 1947 Aug. 27, 1947	2.70 3.10	200 310
	May 11, 1935 May 26, 1935 July 13, 1935 July 20, 1935	4.20	148				
	July 20, 1935	4.95	270	1948	Aug. 5, 1948 Sept.16, 1948	6.8 3.05	1,900 242
1936	Apr. 25, 1936	4.49	241	i '	Sept.10, 1546	3,03	242
	July 19, 1936	6.00	633	1949	Apr. 28, 1949	2.71	206
	July 26, 1936 Aug. 19, 1936	5.85 15.0	574 4,400	1	June 11, 1949	3.00	152
	Aug. 19, 1936 Sept. 9, 1936	4.95	320	1950	Oct. 18, 1949	3.20	197
	Sept.21, 1936	5.3	391		Apr. 23, 1950	2.90	146
1937	Feb. 6, 1937	2.95	179		July 18, 1950	3.1	188
	Feb. 14, 1937	4.3	915	1951	Aug. 29, 1951	3.30	193
	Apr. 27, 1937 May 4, 1937	3.35 3.5	366 442	1952	Oct. 31, 1951	3.20	173
	July 8, 1937	2.95	473	1002	Dec. 30, 1951	3,60	349
	July 29, 1937	4.4	2,000	1 1	May 5, 1952	3.57	672
	Sept.30, 1937	3.6	1,000	1	July 29, 1952 Sept.21, 1952	2.51 2.35	257 194
1938	Dec. 12, 1937	2.0	206				
	Feb. 28, 1938 Mar. 3, 1938	2.05 3.00	211 491	1953	Aug. 27, 1953	4.14	930
	Mar. 12, 1938	1.95	160	1954	Mar. 23, 1954	3.10	446
	Apr. 21, 1938 May 16, 1938	3.20 2.4	575 273	1	June 25, 1954	2.42	195
	July 25, 1938	1.90	140	1955	June 13, 1955	2.12	103
	Sept. 3, 1938	1.90	140	1956	Jan. 27, 1956	2.00	77
1939	Apr. 14, 1939	1.82	133		oun. Er, 1956	2.00	''
	Sept. 6, 1939	2.4 1.90	270	1957	May 8, 1957	2.43	180
	Sept.13, 1939	1.90	150		May 31, 1957 July 11, 1957	2.41	143 225
1940	Feb. 26, 1940	2.0	168	}	Aug. 5, 1957	5.80	1,770
	Apr. 15, 1940 Apr. 22, 1940	2.20	228 233		Aug. 24, 1957 Aug. 25, 1957	2.22	471 630
	Aug. 21, 1940	1.86	137		Aug. 29, 1957	1.72	406
	Aug. 24, 1940	3.30	602	1050	Y 0 1057		007
	Sept.12, 1940 Sept.17, 1940	2.90	416 314	1958	Nov. 2, 1957 Feb. 4, 1958	1.29	203 191
20.0				1	Mar. 22, 1958	1.30	215
1941	Oct. 5, 1940 Dec. 24, 1940	2.8	397 352	ĺ	Apr. 23, 1958 May 11, 1958	1.33 1.50	369 778
	Feb. 21, 1941	2.57	400		Aug. 22, 1958	2.33	a900
	May 13, 1941	4.10	848		Sept. 8, 1958	1.24	188
	May 25, 1941	3.80	496		Sept.12, 1958	1.28	205
1942	Apr. 16, 1942	2.90	178	1959	July 15, 1959	1.55	210
	Apr. 23, 1942	3.20	264		Aug. 11, 1959 Aug. 18, 1959	2.40 1.15	660 152
1943	Apr. 23, 1943	1.99	426				
	Aug. 4, 1943 Aug. 15, 1943	1.44	141 340	1960	June 6, 1960	1.52	240
				1961	Oct. 8, 1960	1.44	139
1944	May 15, 1944	2.00	199		July 3, 1961	1.37	137 266
1945	May 3, 1945	2,27	259		Aug. 30, 1961	1.95	200
ĺ	July 30, 1945	2.27	297	1962	Feb. 8, 1962	1.82	240
a Abo	Aug. 11, 1945	1.60	133	L	Apr. 21, 1962	1.48	184
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4055. North Fork Virgin River near Springdale, Utah

Location. --Lat 37°12'35", long 112°58'40", in SW LNW Sec.22, T.41 S., R.10 W., on right bank in Zion National Park, 0.2 mile downstream from point of diversion of Springdale Canal, 0.5 mile downstream from Pine Creek, and 1.9 miles northwest of Springdale.

Drainage area. -- 350 sq mi, approximately.

Gage.--Nonrecording at several sites within 1 mile of present site at various datums prior to Dec. 15, 1949; recording thereafter. Altitude of gage is 3,970 ft (from topographic map).

Stage-discharge relation.--1913-14: Defined by current-meter measurements below 170 cfs.

1926-62: Defined by current-meter measurements below 1,000 cfs and by slope-area measurement at gage height 12.29 ft. Relation unstable at high stage.

Remarks.--Figures given herein include Springdale Canal which diverts water in NM4NW4 sec.22, T.41 S., R.10 W., for irrigation in vicinity of Springdale. Peak discharges not materially affected by diversions above station for irrigation. Base for partial-duration series, 800 cfs. Only annual peaks are shown prior to 1950.

	reak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	lischarge (cfs)				
1913 1914	Aug. 2, 1913 Nov. 13, 1913	3.5 4.5	920 1,460	1952	May 3, 1952 June 3, 1952	6.76 4.77	2,520 1,190				
1926 1927	Apr. 9, 1926 Apr. 27, 1927	6.60 7.50	710 1,200	1953	July 30, 1953	5.58	1,660				
1928 1929 1930	Oct. 31, 1927 Aug. 3, 1929 May 16, 1930	7.00 11.0 5.80	750 3,900 428	1954	Jan. 25, 1954 Apr. 21, 1954 July 25, 1954	4.16 4.31 6.72	860 945 2,480				
1931 1932	Aug. 6, 1931	9.00	2,370	1955	Oct. 8, 1954	5.50	1,600				
1933 1934	Aug. 27, 1932 Sept. 7, 1933 Aug. 5, 1934	7.00 3.50	2,500 3,000 940		Aug. 12, 1955 Aug. 25, 1955	5.53 8.74	1,620 3,960				
1935 1936	Apr. 8, 1935 Sept. 2, 1936	5.00	1,980	1956	Jan. 26, 1956	4.38	956				
1937 1938	May 15, 1937 Mar. 3, 1938	7.90 5.70 11.0	4,480 2,540 7,000	1957 1958	June 10, 1957 Nov. 3, 1957	4.34	668 925				
1939 19 4 0	Sept. 7, 1939 Sept. 6, 1940	7.62 9.30	2,900 4,110		Feb. 25, 1958 Apr. 22, 1956	5.80 4.88	1,800 1,2 4 0				
1941 1942	May 14, 1941 Oct. 12, 1941	7.68 4.62	3,100 1,180		May 11, 1958 July 23, 1958 Sept. 4, 1958	6.48 4.92 4.24	2,270 1,280 897				
1943 1944	Mar. 4, 1943 May 15, 1944	3.62 5.00	734 1,370	<u> </u>	Sept.12, 1950	5.71	1,770				
19 4 5 19 4 6	Aug. 12, 1945 Oct. 12, 1945	5.60 3.10	1,690 558	1959	Aug. 3, 1959 Aug. 19, 1959	-	1,0e0 2,070				
1947 1948 1949	Oct. 2, 1946 Apr. 21, 1948	8.20 3.82	3,520 798	1960	Nov. 2, 1959	-	430				
1950	Sept. 8, 1949 July 7, 1950	4.52 4.60	1,100	1961	Nov. 6, 1960 July 31, 1961 Sept.17, 1961	4.47 5.42 10.25	999 1,590 5,880				
1951	July 8, 1950 Aug. 29, 1951	7.52 4.42	2,680 833	1962	Feb. 8, 1962	4.44	869				
1952	Dec. 30, 1951	5.75	1,470		Feb. 12, 1962 Apr. 24, 1962 Sept.28, 1962	5.43 5.85 4.27	1,440 1,870 S50				

4060. Virgin River at Virgin, Utah

Location. --Lat 37°11'55", long 113°12'25", in $NW_{1}^{1}NE_{1}^{1}$ sec.28, T.41 S., R.12 W., on right bank 1.1 miles west of Virgin and 2.3 miles downstream from North Creek.

Drainage area. -- 934 sq mi.

<u>Gage.</u>--Nonrecording prior to Dec. 19, 1949, at several sites within 3 miles of present site at various datums; recording thereafter. Altitude of gage is 3,440 ft (from topographic map).

Stage-discharge relation.--1909-49: Defined by current-meter measurements below 1,400 cfs and by slope-area measurements at gage heights 8.04 to 10.7 ft. 1950-62: Defined by current-meter measurements below 1,600 cfs and by slope-area measurements at gage heights 4.81 and 8.58 ft. Relation unstable at all stages.

<u>Remarks</u>.--Diversions for irrigation; peak discharges not greatly affected.
<u>Base</u> for partial-duration series, 1,600 cfs. Only annual peaks are shown prior to 1950.

		Peak stages and discharges											
1911 Sept. 30, 1911 11.0 10,600 1915 3,1952 4,42 2,350 1914 11.0 10,600 1915 0ct. 27, 1912 11.6 12,000 1915 0ct. 27, 1912 11.6 12,000 1915 Sept. 3, 1915 6.5 4,560 1916 Sept. 3, 1915 6.5 4,560 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,71 1,720 Aug. 1, 1953 3,74 1,240 Aug. 4, 1954 6.90 4,690 Aug. 4, 1954 6.90 4,690 Aug. 4, 1954 6.90 Aug. 4, 1954 6.90 Aug. 3, 1, 1922 Aug. 31, 1922 6.66 3,400 1923 Aug. 25, 1925 4.65 4.66 Aug. 25, 1925 4.96 1,660 Aug. 4, 1955 5,30 Aug. 25, 1955 4.25 2,260 Aug. 25, 1925 4.96 1,660 Aug. 4, 1955 5,53 Aug. 25, 1955 4.25 2,260 Aug. 4, 1955 5,53 Aug. 25, 1955 Aug. 4, 1955 Aug. 4, 1950 Aug. 4, 1955 Aug. 4,	year	Date	height			Date	height	Discharge (cfs)					
1911	1910	Jan. 1, 1910	5.8	2,770	1952			2,230					
1913	1912	July 31, 1912						2,620 2,330					
1915 Sept. 3, 1915 6.5		Oct. 27, 1912		12,000	1953			3,200					
1917	1915	Sept. 3, 1915	6.5	4,360	}	Aug. 1, 1953	3.71	1,720					
1918					3054	7 05 3054	- 40						
1919					1954								
1920 Aug. 19, 1920 11.0 11,000 1955 0ct. 7, 1954 4.45 2,360 0ct. 8, 1954 6.42 4,250 1923 July 22, 1923 7.50 5.100 Aug. 4, 1955 5.30 3,220 Aug. 25, 1925 4.96 1,660 Aug. 4, 1955 5.30 Aug. 25, 1925 4.96 1,660 Aug. 1, 1955 5.53 3,290 Aug. 5, 1955 4.25 2,260 Aug. 1, 1955 5.53 3,290 Aug. 1, 1955 5.53 3,290 Aug. 1, 1955 5.53 3,290 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 2, 1955 4.30 2,220 Aug. 25, 1955 11.41 10,600 Aug. 4, 1930 5.48 3,000 1957 June 10, 1957 3.31 1,430 1931 Nov. 17, 1930 5.80 3,550 1957 June 10, 1957 3.31 1,430 1931 Nov. 17, 1930 5.80 3,550 1958 5.34 3,190 1933 Sept. 8, 1933 6.90 2,350 Apr. 8, 1935 6.18 1,760 Apr. 23, 1958 3.55 1,680 Apr. 8, 1935 6.18 1,760 Apr. 23, 1958 3.55 1,680 Apr. 23, 1958 3.55 Apr. 23, 1958 3.55					į								
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1952 Dec. 30, 1951 7.00 4,840 Sept.28, 1962 4.15 2,150	1952	Dec. 30, 1951	7.00	4,840	L								

4065. Ash Creek near New Harmony, Utah

Location. --Lat 37°25', long 113°12', in E2 sec.7, T.39 S., R.12 W., on right bank 2 miles downstream from Kanara Creek and 6 miles southeast of New Harmony.

Drainage area. -- 146 sq mi.

Gage.--Nonrecording at site $1\frac{1}{2}$ miles upstream prior to Feb. 29, 1940; recording thereafter. Altitude of gage is 4,450 ft (from reconnaissance map).

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs and by slope-area measurements at gage heights 3.15, 4.10, 4.25, 4.66, and 6.00 ft. Channel unstable and relation poorly defined at high stages.

Remarks.--Diversions for irrigation of about 2,800 acres; peak flows afferted.

Records for period prior to October 1941 furnished by Bureau of Reclamation.

Base for partial-duration series, 300 cfs.

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1940	Sept.28, 1940	4.25	al,500	1945	July 28, 1945 Aug. 2, 1945	3.86 4.20	910 1,440				
1941	Mar. 1, 1941	4.10	al,400		Aug. 4, 1945	3.84	780				
1942	Oct. 20, 1941	3.50	495	1946	Aug. 23, 1946	3.15	290				
1943	Aug. 17, 1943	3.95	985	1947	Oct. 1, 1946	4.66	642				
1944	Mar. 13, 1944	3.32	385		Oct. 28, 1946 Oct. 28, 1946	5.27 6.00	985 1,360				
1945	Feb. 2, 1945	3.67 3.40	640		Oct. 29, 1946 Nov. 14, 1946	5.92 6.14	1,310 1,430				

a Annual peak only.

4090. Santa Clara River near Central, Utah

Location.--Lat 37°24', long 113°37', in $SE_{4}^{\frac{1}{4}}$ sec.11, T.39 S., R.16 W., on right bank 120 ft upstream from road bridge, 1 mile southeast of Central, and $1\frac{1}{2}$ miles upstream from Kane Spring Draw.

Drainage area. -- 97 sq mi, approximately.

Gage.--Nonrecording at various datums prior to Jan. 5, 1939; recording thereafter. Datum lowered 1.0 ft Apr. 9, 1949. Altitude of gage is 5,170 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 210 cfs and by float measurement at gage height 4.85 ft.

Remarks.--Diversions for irrigation of about 1,300 acres. Small diversion from Grass Valley to Pinto Creek for irrigation in Escalante Valley in the Great Basin. Peak discharges are affected by diversions. Base for partial-duration series, 60 cfs. Only annual peaks are shown prior to 1941.

Peak stages and discharges Gage Gage Discharge (cfs) Water Water Discharge Date height Date height year (cfs) vear (feet) (feet) Dec. 21, 1921 May 19, 1923 May 4, 1924 1909 Sept. 1, 1909 Jan. 1, 1910 7.0 475 1922 4.50 900 1910 7.5 1,400 1923 2.12 138 May 4, 1924 Sept.18, 1925 1924 1.32 22 Jan. 31, 1911 May 20, 1912 Oct. 27, 1912 Feb. 21, 1914 Apr. 29, 1915 1911 6.20 930 1925 2.20 157 4.60 5.80 1912 210 Apr. 19, 1926 Feb. 26, 1927 Feb. 4, 1928 Sept. 3, 1929 1913 742 1926 2.00 105 1914 5.00 440 1927 1.78 65 1915 4.60 310 1928 1.70 54 1929 1.90 52 1916 Mar. 21, 1916 2.90 407 1930 Aug. 9, 1930 1.90 85 Oct. 6, 1916 Mar. 12, 1918 5.00 1917 1,450 1918 3.04 832 1939 Sept.26, 1939 Feb. 26, 1940 1.39 51 Mar. 25, 1919 Mar. 21, 1920 1919 152 202 1940 2.50 1920 2.88 307 1941 Mar. 14, 1941 Apr. 1, 1941 1.74 99 May 30, 1921 1921 1.58 56 1.52 75

Peak stages and discharges of Santa Clara River near Central, Utah--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 11, 1941	1.37	60	1949	Apr. 14, 1949	2.75	132
	May 14, 1941	2.40	192		Apr. 24, 1949	2.18	73
	May 27, 1941	1.94	124	1	May 18, 1949	2.55	112
	June 7, 1941	1.94	124		May 28, 1949	2.25	81
	July 25, 1941	2.54	204		June 11, 1949	2.29	86
	July 26, 1941	2.40	181	1050	A 07 30E0	7.00	35
7040	1 2010		007	1950	Apr. 23, 1950	1.68	35
1942	Apr. 4, 1942	2.25	207	1053	A 00 30E3	7 47	22
	Apr. 23, 1942	1.51	72	1951	Apr. 29, 1951	1.47	22
	May 23, 1942	1.45	68	1050		2,63	160
	Aug. 9, 1942	2.50	214	1952	Apr. 6, 1952	2.63	112
3.047	M 0 3047	0.00	161		Apr. 18, 1952 Apr. 27, 1952	3.13	261
1943	Mar. 9, 1943	2.20	110		May 5, 1952	2.58	150
	Mar. 10, 1943	1.76				2.42	120
	Mar. 29, 1943	1.40	101 63		May 15, 1952 May 21, 1952	2.22	88
	Apr. 24, 1943 May 2, 1943	1.40	85		May 30, 1952	2.36	110
	May 2, 1943	1.62	00	l .	June 3, 1952	2.46	128
1944	Mar. 12, 1944	1.45	60		June 5, 1552	2.40	120
1344	Apr. 7, 1944	2.10	140	1953	Aug. 1, 1953	2.32	105
	May 15, 1944	1.91	112	1303	Aug. 26, 1953	2.08	71
	May 30, 1944	1.86	106		Aug. 20, 1555	2.00	'-
	May 30, 1944	1,00	106	1954	Jan. 25, 1954	2.06	69
1945	Feb. 2, 1945	2.56	219	l)	· ·		1
1340	Apr. 22, 1945	1.50	72	1955	Aug. 25, 1955	2.27	97
	May 13, 1945	1.66	88	1956	Jan. 27, 1956	1.40	12
	Aug. 10, 1945	5.65	753	1500	Jun. 21, 1000	1	
	Aug. 10, 1540	3.00	1 33	1957	June 10, 1957	2.25	92
1946	Oct. 9, 1945	1.30	56	1501	June 10, 155.	1 2.20	"-
1010	000. 5, 1540	1	"	1958	Nov. 3, 1957	2.10	71
1947	Oct. 1, 1946	2.70	226	1000	Feb. 25, 1958	2.33	105
202.	Oct. 29, 1946	3.90	426	l	Mar. 19, 1958	2.35	110
	Nov. 14, 1946	2.50	320		Mar. 30, 1958	2.32	110
	Nov. 23, 1946	2.30	268		Apr. 18, 1958	2.83	179
	May 7, 1947	1.40	98	1	May 11, 1958	2.91	232
	1.00	1.10			May 22, 1 58	2.51	164
1948	Apr. 9, 1948	1.32	96	1			
	Apr. 18, 1948	1.07	68	1959	Oct. 25, 1958	1.51	19
	May 7, 1948	.97	63	1			
	May 18, 1948	.98	64	1960	May 12, 1960	1.75	38
	June 2, 1948	1.05	70		, , ,		
	July 22, 1948	1.30	99	1961	Nov. 6, 1960	3.25	292
		كتت				l	L

4095. Moody Wash near Veyo, Utah

 $\frac{\text{Location.--Lat } 37\,^\circ\!26\,^\circ\!00", \text{ long } 113\,^\circ\!44\,^\circ\!30", \text{ in } SE_u^1\text{ sec.}34\,, \text{ T.36 S., R.17 W., on } \\ 1\,^\circ\!16\text{ft bank } 200\,\text{ ft downstream from Bellas Canyon and } 7\,\text{miles northwest of Veyo.}$

Drainage area .-- 33 sq mi, approximately.

 $\underline{\text{Gage.--Recording gage}}$ and masonry control. Altitude of gage is 4,800 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs and extended above on basis of slope-area measurements at gage heights 3.76 and 8.60 ft

Remarks. -- Base for partial-duration series, 100 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Aug. 16, 1955 Aug. 25, 1955	3.33 5.64	135 532	1960	Mar. 7, 1960	2.44	39
1956	Jan. 26, 1956	3.32	145	1961	Sept.17, 1961	8.60	1,400
1957	Feb. 23, 1957	3.02	195	1962	Feb. 8, 1962 Feb. 9, 1962	4.98 4.55	390 309
1958	Dec. 17, 1957	4.72	344		Feb. 12, 1962 Feb. 16, 1962	4.24 3.66	262 186
	Mar. 16, 1958 Apr. 1, 1958	4.96 3.47	396 145		Mar. 27, 1962 Sept.28, 1962	2.97 5.70	102 546
1959	Feb. 17, 1959	2.27	25				

4100. Santa Clara River above Winsor Dam, near Santa Clara, Utah

Location. --Lat 37°13¹, long 113°47¹, near center of aec.17, T.41 S., R.17 W., on right bank 2 miles upstream from Winsor Dam, 2½ miles downstream from Sandy Wash, 8 miles downstream from Magotsu Creek, and 9 miles northwest of Santa Clara.

Drainage area .-- 338 sq mi.

 $\frac{\text{Gage.--Recording.}}{\text{gage is 3,340 ft (by barometer)}}$. Prior to Aug. 25, 1960, at datum 1.00 ft higher. Altitude of

Stage-discharge relation.--Defined by current-meter measurements below 970 cfs and by slope-area measurements at gage heights 6.25, 6.50, and 9.40 ft. Considerable shifting at all stages.

Remarks.--Many diversions for irrigation. Flow slightly regulated by plants of Southern Utah Power Co. Peak discharges not greatly affected. Base for partial-duration series, 300 cfs.

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1942	Aug. 9, 1942	5,5	2,400	1953	Aug. 26, 1953	9.40	5,340				
1943	Mar. 10, 1943	2,92	269	1954	Jan. 25, 1954 Mar. 23, 1954	3.13 3.32	400 536				
1944	Mar. 10, 1944	2.95	320		July 16, 1954 July 26, 1954	2.76 3.27	334 523				
1945	Feb. 2, 1945 July 8, 1945 July 31, 1945	3.77 4.05 6.50	579 618 2,100		Aug. 13, 1954 Sept. 2, 1954	2.98 2.68	412 301				
	Aug. 2, 1945 Aug. 10, 1945 Aug. 11, 1945	3.88 3.82 4.20	533 516 680	1955	July 24, 1955 July 25, 1955 July 31, 1955	5.98 4.01 6.37	2,240 910 2,550				
1946	Oct. 11, 1945 Apr. 27, 1946	3.35 3.15 3.85	390 334		Aug. 16, 1955 Aug. 24, 1955 Aug. 25, 1955	3.87 10.25 8.50	834 6,190 4,460				
	July 20, 1946 Aug. 12, 1946 Aug. 22, 1946	4.34 3.36	535 685 393	1956	July 27, 1956	5.87	2,160				
1947	Oct. 28, 1946 Nov. 14, 1946	5.81 4.47	1,870 800	1957 1958	Feb. 23, 1957 Dec. 17, 1957	2.60 3.51	280 685				
	Nov. 24, 1946 Dec. 27, 1946 Aug. 10, 1947	6.25 3.48 4.25	2,400 427 700		Mar. 16, 1958 Mar. 22, 1958 Apr. 2, 1958	4.28 2.43 3.49 2.87	1,100 370 701 521				
1948	Aug. 3, 1948 Aug. 8, 1948 Sept.16, 1948	3.92 4.93 4.97	494 1,050 1,080	1959 1960	May 12, 1958 Aug. 11, 1959 June 6, 1960	2.50	348 78				
1949	Sept. 9, 1949	3.65	398	1961	Nov. 6, 1960 Aug. 10, 1961	4.48 3.90	813 557				
1950	July 17, 1950	6.50	2,730		Sept.17, 1961	5.12	1,180				
1951	Aug. 3, 1951	3.11	242	1962	Feb. 9, 1962 Feb. 9, 1962	4.72 4.70	1,010				
1952	Dec. 30, 1951 Apr. 7, 1952 July 28, 1952	3.32 3.65 3.10	326 753 341		Feb. 12, 1962 Feb. 16, 1962 Sept.28, 1962	3.50 3.31 8.11	470 401 3,160				

4130. Santa Clara River at St. George, Utah

Location.--Lat $37^{\circ}04^{\circ}30^{\circ}$, long $113^{\circ}35^{\circ}15^{\circ}$, in NE_{u}^{1} sec.1, T.43 S., R.16 W., on right bank half a mile upstream from mouth and 2 miles south of St. George.

Drainage area. -- 540 sq mi, approximately.

Gage. -- Recording. Altitude of gage is 2,750 ft.

Stage-discharge relation.--Defined by current-meter measurements below 400 cfs and extended above on basis of indirect measurements at gage heights 7.31 and 9.48 ft.

Remarks.--Diversions above station for irrigation of about 4,800 acres in Santa Clara River basin do not materially affect peak flows. Base for partial-duration series, 400 cfs.

Peak stages and discharges of Santa Clara River at St. George, Utah

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 17, 1951 July 28, 1951	5.69 6.93	807 1,160	1954	Sept. 2, 1954	4.67	488
	Aug. 2, 1951	6.71	1,090	1955	July 19, 1955	4.80	572
	Sept.28, 1951	7.29	1,270	1	July 24, 1955	7.62	1,370
			/		July 25, 1955	7.19	1.240
1952	Apr. 8, 1952	4.60	521	Į.	Aug. 1, 1955	5.60	783
	, , ,			1	Aug. 22, 1955	6.94	1,160
1953	Aug. 27, 1953	9.48	3,240		Aug. 24, 1955	10.02	4,200
	<u> </u>		,	į.	Aug. 25, 1955	9.95	4,060
1954	Mar. 23. 1954	4.45	434	i	J. , .		,
	July 17, 1954	4.58	466	1956	May 21, 1956	4.80	572
	Aug. 13. 1954	4.54	456		June 30, 1956	6.63	1,070
	Sept. 2, 1954	4.80	521		July 28, 1956	4.27	438

4135. Virgin River near St. George, Utah

Location.--Lat 37°01', long 113°40', in W_2^1 sec.29, T.43 S., R.16 W., on right bank 8 miles southwest of St. George.

Drainage area. -- 3,820 sq mi, approximately.

Gage . -- Recording .

Stage-discharge relation. -- Defined by current-meter measurements below 12,000 cfs.

Remarks.--Diversions for irrigation of about 23,000 acres above station do not materially affect peak flows. Base for partial-duration series, 1,600 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	July 22, 1951 July 28, 1951 Aug. 4, 1951 Aug. 30, 1951	4.20 4.47 11.24 7.65	1,600 1,980 11,600 6,290	1954	Jan. 25, 1954 July 26, 1954 Aug. 4, 1954 Sept.12, 1954	5.40 5.10 9.00 6.30	3,720 2,850 8,720 4,700
1952	Dec. 30, 1951 Jan. 19, 1952 Apr. 8, 1952 Apr. 27, 1952 June 3, 1952 Sept.21, 1952	8.00 3.15 4.60 5.65 4.20 3.95	6,840 1,140 2,280 3,550 1,600 1,220	1955	Oct. 9, 1954 July 25, 1955 Aug. 5, 1955 Aug. 13, 1955 Aug. 17, 1955 Aug. 24, 1955 Aug. 25, 1955	5.46 5.80 7.20 3.98 4.60 9.20 12.70	3,320 3,670 5,520 1,510 2,080 8,550 13,800
1953	July 25, 1953 July 31, 1953 Aug. 1, 1953 Aug. 27, 1953	7.15 4.05 7.05 8.35	5,340 1,670 5,210 7,280	1956	Jan. 27, 1956 June 30, 1956 July 30, 1956	5.40 5.70 4.03	3,310 3,670 1,580

4150. Virgin River at Littlefield, Ariz.

<u>Location</u>.--Lat 36°53', long 113°56', in $SW_{u}^{\frac{1}{4}}SW_{u}^{\frac{1}{4}}$ sec.4, T.40 N., R.15 W., three-eighths of a mile downstream from Beaverdam Wash, three-eighths of a mile upstream from Littlefield, and 36 miles upstream from water line of Lake Mead at elevation 1,221 ft above mean sea level.

Drainage area. -- 5,090 sq mi, approximately.

Gage. --Nonrecording prior to Apr. 1, 1942; recording thereafter. At site 300 ft upstream prior to May 28, 1933. At datum 2.53 ft higher prior to Nov. 8, 1939, and 2.00 ft higher Nov. 8, 1939, to Mar. 31, 1942. Datum of gage is 1,763.68 ft above mean sea level, datum of 1929.

 $\frac{Stage-discharge \ relation.--Defined \ by \ current-meter \ measurements \ below \ 2,500}{cfs \ and \ extended \ above \ on \ basis \ of \ slope-area \ measurement \ at \ 22,000 \ cfs.}$

Bankfull stage .-- 18 ft.

Remarks.--Peak discharges not materially affected by irrigation diversions.

Base for partial-duration series, 1,600 cfs. Only annual peaks are shown prior to 1941.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Aug. 9, 1930	8.65	6,500	1951	Aug. 4, 1951	10.53	12,000
1071	N 10 1070	2.50	7 00-		Aug. 30, 1951	8.05	4,260
1931 1932	Nov. 18, 1930 Aug. 27, 1932	6.50 11	3,000 18,000	1952	Dec. 30, 1951	8,70	7,170
1933	May 1, 1933	11_	1,500	1932	Apr. 8, 1952	6.14	2,400
1934	Dec. 14, 1933	4.20	1,220		Apr. 28, 1952	7.40	3,840
1935	Aug. 16, 1935	5.00	1,900		May 4, 1952	7,26	3,060
		_			June 4, 1952	6.00	2,280
1936 1937	July 10, 1936	7.0	2,710	1057	T1 00 1057	5.40	1 700
1938	Feb. 7, 1937 Mar. 3, 1938	5.00 10.3	1,440	1953	July 26, 1953	5.46 5.71	1,700 1,950
1939	Sept.12, 1939	7.5	13,000		July 31, 1953 Aug. 2, 1953	7.74	4,500
1940	Sept.18, 1940	7.4	11,000		Aug. 27, 1953	8.66	5,490
					1		-,
1941	Mar. 2, 1941	5.00	6,000	1954	Jan. 25, 1954	6.59	2,470
	July 25, 1941	5.00	6,000	1	Mar. 23, 1954	5.76	1,640
1942	Oct. 13, 1941	6.30	3,740		July 26, 1954 Aug. 4, 1954	6.20 9.18	1,990 6,020
1316	Apr. 14, 1942	4.84	1,630		Sept.12, 1954	8.12	4,200
	Apr. 23, 1942	5.7	2,800		DCp0.12, 1304	0.12	1,200
	Aug. 10, 1942	5.3	2,200	1955	Oct. 9, 1954	7.18	2,650
			}	ł	July 25, 1955	7.60	3,150
1943	Jan. 23, 1943	5.13	2,080	1	Aug. 5, 1955	8.95	5,420
	Feb. 23, 1943	4.67	1,630	i	Aug. 17, 1955	6.52	2,010
	Mar. 11, 1943	5.62 4.89	2,660		Aug. 25, 1955	13.60	19,800
	Aug. 2, 1943 Aug. 17, 1943	4.77	1,790 1,650	1956	Jan. 27, 1956	6.89	2,460
	1146. 17, 1040	4.11	1,000	1 1300	June 30, 1956	5.77	1,660
1944	May 9, 1944	4.99	1,900				
				1957	Feb. 24, 1957	6.13	1,730
1945	Feb. 3, 1945	6.57	4,170		June 11, 1957	6.08	1,690
	Mar. 16, 1945 Aug. 4, 1945	5.15 5.51	1,790 2,520	1	Aug. 21, 1957	8.00	3,950
	Aug. 12, 1945	6.08	3,410	1958	Oct. 22, 1957	6.47	2,320
	Aug. 18, 1945	5.01	1,900	1000	Nov. 1, 1957	6.58	2,160
	Sept. 3, 1945	5.75	2,880	1	Nov. 3, 1957	7.62	3,390
					Dec. 18, 1957	5.91	1,600
1946	Oct. 12, 1945	5.77	2,880	l	Feb. 26, 1958	7.10	2,700
1	Aug. 5, 1946 Aug. 12, 1946	5.83 6.95	3,020 5,010	l	Mar. 17, 1958	9.87 7.02	7,180 2,510
	nug. 12, 1340	0.30	3,010		Mar. 23, 1958 Apr. 2, 1958	8.14	4,250
1947	Oct. 2, 1946	7.25	4,300		Apr. 23, 1958	6.29	2,090
	Oct. 29, 1946	9.35	9,400		May 6, 1958	6.19	2,210
	Nov. 14, 1946	7.81	5,140		May 12, 1958	8.36	4,900
	Nov. 24, 1946	8.33	6,640	}	July 24, 1958	6.10	2,140
	Dec. 28, 1946	6.69	2,790	ļ.	Sept. 3, 1958	7.07	3,130
1	Aug. 10, 1947	7.28 6.05	3,950		Sept. 4, 1958	6.81	2,810 6,580
	Aug. 13, 1947	0.03	1,660		Sept.12, 1958	9.38	6,360
1948	Sept.16, 1948	5.19	1,090	1959	Aug. 12, 1959	7.15	2,940
)]		Aug. 19, 1959	7.76	3,490
1949	Sept. 8, 1949	5.77	1,690	1		0.05	
ļ	Sept.10, 1949	6.35	2,290	1960	Nov. 3, 1959	6.28	2,320
1950	July 8, 1950	6,38	2,470	1961	Nov. 7, 1960	6.92	2,840
· · ·	July 18, 1950	7.34	3,450	-5	July 4, 1961	5.81	1,910
	Sept. 8, 1950	5.99	1,700	1	Aug. 4, 1961	5.16	1,660

Peak stages and discharges of Virgin River at Littlefield, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1961	Aug. 12, 1961 Aug. 24, 1961 Aug. 30, 1961 Sept. 9, 1961 Sept.18, 1961	6.85 6.87 5.18 6.19 10.84	3,500 3,530 1,680 2,700 10,900	1962	Feb. 9, 1962 Feb. 10, 1962 Feb. 12, 1962 Feb. 16, 1962 Sept. 28, 1962	6.95 6.30 8.12 5.70 6.90	3,640 2,820 5,380 42,180 3,570

4160. Muddy River near Moapa, Nev.

 $\frac{\text{Location.}\text{--Lat 36°42'40", long 114°41'40", in SE}_{4}^{1} \sec.15, \text{T.14 S., R.65 E., on left bank three-quarters of a mile downstream from Home Ranch, 5 miles northwest of Moapa, and <math>9\frac{1}{2}$ miles upstream from Meadow Valley Wash.

<u>Drainage area.--3,820</u> sq mi, approximately, of which about 40 sq mi contributes <u>directly</u> to surface runoff.

Gage.--Recording. Altitude of gage is 1,710 ft (from river-profile map). At datum 0.08 ft higher Oct. 21, 1944, to Sept. 30, 1948.

Stage-discharge relation.--Defined by current-meter measurements below 60 cfs and by culvert measurement at gage height 2.10 ft. Relation at high stage based on computed discharge over Cippoletti weir.

Remarks.--Diversions for irrigation. Normal flow originates from springs in reach 0.9 to 2.5 miles upstream from station. Peak discharges not materially affected by diversions. Base for partial-duration series, 70 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	Aug. 31, 1913	-	85	1954	Oct. 22, 1953	1.71	98
1914	Feb. 21, 1914	9.9	-		Jan. 20, 1954 Mar. 23, 1954 July 25, 1954	1.45 1.54 1.58	76 8 4 85
1915	Feb. 11, 1915	1.9	88		, ,		65
1916	July 24, 1916	2.3	68	1955	Aug. 16, 1955	5.02	-
1917	July 23, 1917	1.5	62	1956	July 22, 1956	1.17	59
	1		-	1957	Feb. 19, 1957	3.77	356
1945	July 31, 1945	7.92	-	1958	Feb. 4, 1958	3.23	280
1946	July 23, 1946	3.30	290	1959	,		
1947	Oct. 28, 1946	2.44	162		Aug. 19, 1959	1.88	120
1948	Dec. 5, 1947	1.65	82	1960	Dec. 25, 1959	3.13	260
1949	Jan. 13, 1949	1.31	61	1961	Oct. 10, 1960 Nov. 6, 1960	1.32 6.55	70 1,100
1950	July 22, 1950 July 27, 1950	2.46 1.55	173 74		Apr. 7, 1961 July 3, 1961 July 31, 1961	1.39 3.25 2.53	78 272 175
1951	Sept.28, 1951	1.71	93		Aug. 24, 1961	1.40	73
1952	July 30, 1952	2.10	132	1962	June 29, 1962 Sept.28, 1962	1.38 1.31	76 70
1953	July 14, 1953	4.14	-				

4180. Meadow Valley Wash near Panaca, Nev.

Location.--Lat 37°52', long 114°19', in sec.13, T.1 S., R.68 E., on left bank 200 ft downstream from road bridge at Delmues Ranch, 6 miles northeast of Panaca, and 9 miles southeast of Pioche.

Drainage area. -- 450 sq mi, approximately.

Gage . -- Recording.

Stage-discharge relation.--Defined by current-meter measurements below 33 cfs and by slope-area measurements at gage heights 3.50 and 4.40 ft.

Remarks.--Diversions for irrigation. Peak discharges may be affected. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 2, 1945 Mar. 15, 1945	2.55 1.68	305 110	1946	Aug. 5, 1946	4.40	946
	Aug. 2, 1945 Aug. 4, 1945 Aug. 5, 1945	3.50 2.58 2.20	605 305 210	1947	Oct. 1, 1946 Oct. 29, 1946	3.59 3.45	619 584
	Aug. 9, 1945 Aug. 10, 1945	1.64 1.92	101 154	1948	Feb. 20, 1948	1.44	70
	Aug. 12, 1945 Aug. 19, 1945	2.09 2.94	192 43 3	1949	Mar. 20, 1949	1.61	43

4185. Meadow Valley Wash near Caliente, Nev.

<u>Location</u>.--Lat 37°33'20", long ll4°33'50", in NE_{π}^{1} sec.35, T.4 S., R.66 E., on right bank half a mile east of Etna and $4\frac{1}{2}$ miles southwest of Caliente.

 $\underline{\text{Gage.--Recording.}}$ At site $1\frac{3}{4}$ miles downstream at different datum prior to June 16, 1955. Altitude of gage is 4,200 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 60 cfs and extended above on basis of slope-area measurement at 1,500 cfs.

 $\underline{\text{Remarks.}}$ --Several diversions for irrigation do not materially affect peak flows. Base for partial-duration series, 300 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Dec. 30, 1951 Mar. 1, 1952 Mar. 27, 1952 Apr. 7, 1952	2.72 2.60 2.70 2.38	740 978 1,000 777	1955	Aug. 5, 1955 Aug. 9, 1955 Aug. 17, 1955	5.60 4.95 5.10	740 499 542
1953	Aug. 2, 1953	.90	110	1956	June 30, 1956 July 24, 1956	7.10 7.07	1,500 1,480
1954	July 25, 1954 Aug. 13, 1954	1.66 1.57	362 327	1957	Feb. 11, 1957	3,60	117
	Sept. 4, 1954	2.44	825	1958	Mar. 22, 1958	4.20	249
1955	Mar. 4, 1955	2,33	647	1959	Feb. 19, 1959	3.28	75
	July 18, 1955 Aug. 3, 1955	4.44 5,70	323 785	1960	Feb. 10, 1960	3.61	_ 98

4190. Muddy River near Glendale, Nev.

- <u>Location</u>.--Lat 36°38'35", long 114°32'20", in SW $_{4}^{1}$ sec.7, T.15 S., R.67 E., on left bank at the Narrows, 150 ft downstream from Weiser Wash, 2 miles southeast of Glendale, 2.4 miles downstream from Meadow Valley Wash, and $4\frac{1}{2}$ miles northwest of Logandale.
- <u>Drainage area</u>.--8,120 sq mi, approximately, of which about 4,170 sq mi contributes directly to surface runoff.
- Gage .-- Recording. Altitude of gage is 1,460 ft (from river-profile map).
- Stage-discharge relation. -- Defined by current-meter measurements below 460 cfs and extended above on basis of slope-area measurements at £.42 and 20.36 ft, and logarithmic plotting.
- Remarks.--Diversions for irrigation above station do not materially affect peak flows. Base for partial-duration series, 210 cfs.

	Peak stages and discharges							
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1951	Apr. 19, 1951	8.72	879	1956	July 1, 1956	5.19	39 8	
1952	Mar. 2, 1952 Mar. 28, 1952	4.51 6.74	339 621	1957	Aug. 21, 1957	9.51	986	
	Apr. 8, 1952	4.16	291	1958	Oct. 20, 1957 Nov. 3, 1957	8.79 8.31	870 841	
1953	Aug. 26, 1953	3.52	205		Feb. 4, 1958	5.89	513	
1954	July 26, 1954	4.77	351	1959	Oct. 25, 1958	2.73	130	
1955	Mar. 10, 1955 Aug. 4, 1955	4.02 4.30	273 307	1960	Dec. 25, 1959	2.52	136	
	Aug. 6, 1955	3.78	246	1961	Nov. 6, 1960	20.36	7,380	
	Aug. 9, 1955	10.22	1,090		Apr. 7, 1961	7.80	720	
	Aug. 12, 1955	4.82	372		July 3, 1961	11.85	1,550	
	Aug. 18, 1955	6.99	654	1962	Beb 17 1000	-0.07	a534	
	Aug. 24, 1955 Aug. 26, 1955	10.11	1,070 1,460	1962	Feb. 13, 1962	a6.07	8554	
a At		12.00	1,400	 	L	L		
a At	Teapr.							

4195. Muddy River near Overton, Nev. (Published as "near St. Thomas" 1913-16)

- <u>Location</u>.--Lat 36°38', long 114°30', in $NW_{\overline{L}}^{1}NE_{\overline{L}}^{1}$ sec.21, T.15 S., R.67 E., at Wells Siding diversion dam, 2 miles northwest of Logandale, 5 miles downstream from Meadow Valley Wash, $6\frac{1}{2}$ miles northwest of Overton, and $7\frac{1}{2}$ miles southeast of Moapa.
- <u>Drainage area.</u>--8,180 sq mi, approximately, of which about 4,230 sq mi contributes directly to surface runoff, for site near Overton, 1948-50. About 200 sq mi greater for sites near St. Thomas, 1913-16 (now submerged by Lake Mead).
- <u>Gage.</u>--Nonrecording June 1913 to September 1916, at two separate sites $14\frac{1}{2}$ and 15 miles downstream at different datums. Recording at present site since Dec. 13, 1947. Datum of gage is 1,432.16 ft above mean sea level, datum of 1929 (Bureau of Reclamation bench mark).
- Stage-discharge relation. -- Crest of diversion dam forms control at present site.

 Relation defined by current-meter measurements below 400 cfs. Water may also be bypassed downstream through a 4-foot pipe below crest elevation. Relation subject to shifting, resulting from operational changes of crest conditions. Relation at former site defined by current-meter measurements below 300 cfs and extended above on basis of slope-area measurement at 6,500 cfs. Relation subject to shifting.
- Historical data. -- Studies by the Corps of Engineers indicate that the flood of Aug. 11, 1941, was the highest since 1906.
- Remarks.--Records at present site show discharge below Wells Siding Dam and do not include diversions at this point which may total about 200 cfs. Large floods are probably not significantly affected by diversions. Gage heights are not listed because of complex stage-discharge relation. Only annual peaks are shown. Discharges 1906, 1910, 1922, 1925, 1938, 1941, 1947 and 1948 estimated by Corps of Engineers, U.S. Army, Nevada State Engineer's Office, U.S. Scil Conservation Service, U.S. Bureau of Reclamation, or U.S. Office of Indian Affairs.

Peak stages and discharges of Muddy River near Overton, Nev.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	I decharge
1906	Mar. 25, 1906	-	8,850	1941	Aug. 11, 1941	-	12,000
1910	Jan. 1, 1910		7,000	1947	Oct.28-30,1946	-	7,800
1914 1915	Feb. 22, 1914 Feb. 11, 1915	-	6,500 820	1948 1949	Feb. 29, 1948 Feb.5, 9-11, 1949	-	111 36
1916	Jan. 20. 1916	-	1,700	1950	Dec. 26, 1949	-	30
1922	Jan. 2, 1922	_	8,110	1951 1952	Apr. 19, 1951 Mar. 28, 1952	-	360 562
1925	Sept.18, 1925	-	10,200	1953 1954	Jan. 19, 1953 July 26, 1954	0.94	37 76
1938	Mar. 3, 1938	-	10,000				

LAS VEGAS WASH BASIN

4197. Las Vegas Wash near Henderson, Nev.

Location.--Lat 36°05'20", long 114°59'05", in $SE_{\overline{u}}^{1}SW_{\overline{u}}^{1}$ sec.30, T.21 S., R.63 E., Mount Diablo meridian, on right bank at upstream end of 5-foot pipe culvert on private road, 3.5 miles north of Henderson and 6.0 miles upstream from high-water line of Lake Mead at elevation 1,221.4 ft above mean sea level.

<u>Drainage area</u>.--2,156 sq mi, of which 1,518 sq mi contributes directly to surface runoff. Prior to Apr. 4, 1961, 2,179 sq mi, of which 1,571 sq mi contributed directly to surface runoff.

 $\underline{\text{Gage.--}}$ Recording. At site 2.5 miles downstream at various datums prior to Apr. 4, 1961. Altitude of gage is 1,540 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 95 cfs and extended above on basis of slope-area measurement at 1,400 cfs.

Remarks. -- In closed basin above station, 2,150 acres are irrigated mostly by pumping from ground water. Discharge includes waste water from industrial plants and sewage effluent. Peak discharges are not materially affected by these operations. Base for partial-duration series, 50 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1957	Aug. 21, 1957	3.65	al,400	1960	Nov. 2, 1959 Dec. 25, 1959	1.92	72 52		
1958	Feb. 4, 1958	.39	68	1961	July 3, 1961	6.42	300		
1959	Oct. 25, 1958 Nov. 12, 1958	1.92 3.83	80 1,150		Aug. 29, 1961	6.93	472		
	Aug. 18, 1959	2.09	82	1962	Sept.27, 1962	6.33	280		

a Annual peak only.

4240, Colorado River near Topock, Ariz.

<u>Location</u>.--Lat 34°41'15", long 114°27'45", in $SW_{\frac{1}{4}}^{\frac{1}{4}}NW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.13, T.15 N., R.21 W., Gila and Salt River meridian, 2.7 miles downstream from Topock, 39.5 miles upstream from Parker Dam, and 49 miles downstream from Davis Dam.

Drainage area. -- 172,300 sq mi, approximately.

 Gage. --Recording. At site about 1 mile upstream at different datum prior of Dec. 3, 1922. Since May 1, 1939, auxiliary recording gage at bridge at Topock, 2.7 miles upstream, at datum 13.33 ft higher. Datum of gage is At site about 1 mile upstream at different datum prior to 423.02 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to large shifts.

Historical data .-- A discharge of about 300,000 cfs (based on determination for station at Lees Ferry) occurred about July 10, 1884. Discharge in excess of 400,000 cfs (estimated) probably occurred within the period 1857-68 and most likely in 1862. Gage heights listed for these floods are elevations above sea level, Atlantic and Pacific Railroad datum.

Remarks.--Peak discharges prior to Feb. 1, 1935, not appreciatly affected by storage and diversions. Discharge controlled by Hoover Dam since Feb. 1, 1935, and by Davis Dam since Jan. 17, 1950. Base for partial-duration series, 40,000 cfs. Only annual peaks are shown prior to 1918 and subsequent to 1924 quent to 1934.

Peak stages and discharges

Gage Gage Discharge Water Discharge Water Date height Date height (feet) (cfs) year (cfs) year (feet) 19.90 1862 500 5 a400,000 1928 May June 17, 1928 7, 1928 86,300 112,000 22 73 a300,000 1884 July 10, 1884 492.0 1929 Apr. 8, 1929 Apr. 25, 1929 17.62 48,100 16.15 44,300 1917 June 1917 27 156,000 June 1, 1929 21.9 101,000 11.9 15.98 1918 Mar. 14, 1918 45,500 Aug. 10, 1929 60,600 15.82 Aug. 16, 1929 Sept.12, 1929 Sept.27, 1929 59,200 42,500 May 16, 1918 May 30, 1918 13.1 13.65 53,500 57,000 14.47 June 30, 1918 July 17, 1918 16.00 48,600 15.55 94,000 8.8 56,000 1930 1, 1930 16.60 44,200 Мау May 12, 1919 June 5, 1919 July 21, 1919 19.74 17.90 65,100 60,700 1919 11.75 45,000 June 6, 1930 June 19, 1930 14.65 78,500 1930 18.35 57,100 Aug. 14. 10.8 42,100 32,000 Feb. 26, 1920 1920 16.3 61,000 1931 May 24, 1931 15.82 1, 1920 6, 1920 156,000 a57,000 June 26.1 49,200 July 1932 Feb. 13, 1932 19.40 41,200 97,100 66,300 45,500 Apr. 26, 1932 16.95 23.75 18.22 15.5 30, 1932 12, 1921 80,800 May 1921 May June 22, 1921 Aug. 5, 1921 Aug. 27, 1921 a200,000 62,300 68,000 July 2, 1932 Sept. 2, 1932 28.4 10.75 15.26 14.2 1933 June 18, 1933 20.22 78,000 1922 Mar. 22, 1922 11.36 41,700 1934 May 20, 1934 14.76 May 13, 1922 June 3, 1922 87,800 125,000 25,600 18.0 20.95 1935 June 24, 1935 14.83 18,600 74,200 103,000 97,400 85,300 1923 16.9 Mav June 3, 1923 June 22, 1923 Sept.22, 1923 18.6 1936 Aug. 2, 1936 13.90 11,500 Aug. 24, 1937 16.45 1937 14.28 16.55 11,300 1938 3, 1938 July 18,800 18.3 1939 Feb. 2, 1939 24.18 34,900 17,500 1940 1940 24.68 Apr. 1924 Dec. 31, 1923 13.7 51,100 Apr. 16, 1924 Apr. 30, 1924 May 25, 1924 13.98 50,700 40,300 66,000 1, 1941 11.91 15.35 1941 June 25.94 b34,500 June 16, 1941 Dec. 25.99 June 20, 1924 15.85 1942 17, 1941 Jan. 29, 1942 35,700 51,200 10, 1925 June 6, 1925 June 28, 1925 1943 Oct. 1942 b22,200 14.70 48,500 29.35 July 19, 1943 13.86 1944 Feb. 27, 1944 b24,000 12, 1926 1, 1926 Aug. 1926 Mav 18.15 68,600 6, 1944 29.20 Mar. 24, 1945 July 2, 1945 b22,300 June 19.80 84,800 1945 28.83 64,300 87,900 70,800 107,000 16.88 1927 May 13, 1927 May 15, 1927 May 25, 1927 June 24, 1927 July 5, 1927 Sept.17, 1927 Feb. 2, 1946 Apr. 20, 1946 b20,700 19.54 16.20 22.2 1946

1947

Feb.

May

1, 1947

1947

28.69

29.23

b18,700

21.63

a Estimated. b Maximum daily mean discharge.

Peak stages and discharges of Colorado River near Topock, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Itscharge (cfs)
1948	Apr. 16, 1948 May 1, 1948	29.69	b23,100	1954 1955	May 22, 1954 June 27, 1955	33.30 33.67	18,100
1949	Apr. 16, 1949	-	b23,400]]	June 21, 1500	05.0.	10,100
	May 29, 1949	29.72	-	1956	July 1, 1956	33.40	-
1950	Dec. 11, 1949	-	b22,800	il .	July 7, 1956	-	15,700
	Jan. 15, 1950	30.63	-	1957	July 7, 1957	33.92	Í
	l			ll .	July 11, 1957	-	17,200
1951	June 26, 1951	-	b22,200	1958	May 3, 1958	-	b24,500
	June 27, 1951	30.93	-	!!	May 11, 1958	34.03	· -
1952	June 5, 1952	-	26,900	1959	July 9, 1959	34.35	18,200
	June 19, 1952	33.15	#	1960	July 1, 1960	34.19	17,700
1953	Oct. 1, 2, 1952	-	b22,900		, ,		
	July 3, 1953	32.56	-	1961	Mar. 31, 1961	33.95	17,600
1954	May 20, 1954		b19,700	1962	Apr. 15, 1962	34.02	17,700

b Maximum daily mean discharge.

BILL WILLIAMS RIVER BASIN

4250. Date Creek near Congress, Ariz.

<u>Location</u>.--Lat 34°12′, long 113°08′, in $NW_u^1SE_u^1$ sec.13, T.10 N., R.9 W., 0.6 mile upstream from Sawyer damsite, 17 miles west of Congress, and 25 miles upstream from mouth.

Drainage area .-- 127 sq mi.

Gage .-- Nonrecording prior to Jan. 19, 1940; recording thereafter.

Stage-discharge relation.--Defined by current-meter measurements below 182 cfs and extended above on basis of slope-area measurement at gage height 5.75 ft. Relation subject to large shifts.

 $\underline{\underline{Remarks}}$.--Peak discharges unaffected by small minor irrigation diversions. Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 3, 1940	3.50	25	1942	Dec. 11, 1941	3.75	13
1941	Feb. 25, 1941 Mar. 2, 1941 Mar. 5, 1941	4.48 4.42 4.06	427 388 148	1943	Jan. 24, 1943 Aug. 3, 1943	3.98 5.3	51 300
	Mar. 14, 1941 Apr. 13, 1941 July 18, 1941	5.75 5.11 4.69	1, 4 00 878 568	1944	Feb. 24, 1944 Mar. 3, 1944	5.26 4.3	280 56

4255. Santa Maria River near Alamo, Ariz.

<u>Location</u>.--Lat 34°18′, long 113°31′, in $NE_{\bar{u}}^{1}SW_{\bar{u}}^{1}$ sec.9, T.11 N., R.12 W., half a mile upstream from confluence with Big Sandy River and $5\frac{1}{\bar{u}}$ miles upstream from Alamo.

Drainage area. -- 1,520 sq mi, approximately.

<u>Gage.</u>--Recording. At site 800 ft upstream at datum 2.50 ft higher pricr to Apr. 1, 1951. Datum of gage is 1,124.1 ft above mean sea level (from riverprofile survey).

Stage-discharge relation. -- Defined by current-meter measurements below 29,000 cfs.

Remarks.--Peak discharges unaffected by small diversions. Base for partialduration series, 200 cfs. Peak stages and discharges of Santa Maria River near Alamo, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Sept. 6, 1939	10.0	a22,300	1952	Apr. 29, 1952	4.88	522
1940	Feb. 3, 1940 Sept.17, 1940	3.31 3.20	256 26 2	1953	June 3, 1952 July 16, 1953 Aug. 28, 1953	7.1 4.60 5.61	2,800 200 560
1941	Oct. 5, 1940 Dec. 24, 1940 Dec. 31, 1940 Jan. 12, 1941 Jan. 25, 1941 Feb. 8, 1941	4.25 6.9 4.25 3.62 4.65 3.91	2,500 8,280 3,120 262 1,890 304	1954	Feb. 16, 1954 Mar. 23, 1954 Mar. 26, 1954 Mar. 27, 1954	4.62 9.15 5.45 5.00	200 16,000 1,820 1,060
	Feb. 21, 1941 Feb. 24, 1941 Mar. 1, 1941 Mar. 6, 1941 Mar. 14, 1941 Apr. 2, 1941 Apr. 13, 1941 Sept.13, 1941	4.40 5.70 7.75 4.98 9.85 4.83 8.3 7.73	1,730 4,440 11,700 2,400 20,600 840 13,900 11,600	1955	July 19, 1955 July 21, 1955 July 24, 1955 July 25, 1955 Aug. 8, 1955 Aug. 11, 1955 Aug. 12, 1955 Aug. 17, 1955 Aug. 18, 1955	4.16 4.33 6.81 5.80 4.75 5.18 5.73 4.84 7.4	276 382 5,850 2,840 898 1,390 2,540 578
1942	Jan. 14, 1942	4.86	91		Aug. 23, 1955 Aug. 26, 1955	5.88 6.85	2,130 4,840
1943	Jan. 24, 1943 Mar. 5, 1943 Aug. 4, 1943	5.15 5.38 5.49	319 497 544	1956	July 24, 1956	3.72	107
1944	Oct. 19, 1943 Feb. 24, 1944 Mar. 3, 1944 Mar. 14, 1944	5.26 7.05 5.82 6.33	278 6,000 2,040 2,980	1957	Jan. 27, 1957 Feb. 24, 1957 Aug. 13, 1957 Aug. 19, 1957 Aug. 20, 1957	4.78 4.59 5.58 6.28 6.44	369 322 899 1,710 2,050
1945	Mar. 17, 1944 Mar. 5, 1945 Mar. 16, 1945 Mar. 26, 1945 Aug. 1, 1945 Aug. 23, 1945	5.70 6.14 6.30 6.28 6.10	1,880 515 1,220 1,530 1,040 680	1958	Oct. 12, 1957 Oct. 31, 1957 Nov. 4, 1957 Feb. 5, 1958 Mar. 17, 1958 Mar. 22, 1958	6.56 3.57 4.85 7.73 5.44 8.43	3,050 203 875 4,090 1,320 7,870
1946	Dec. 24, 1945 July 24, 1946	5.86 6.52	255 1,170		Apr. 4, 1958 June 22, 1958 Sept. 5, 1958 Sept. 8, 1958	5.92 4.75 5.45 5.31	1,960 260 548 444
1947	Dec. 28, 1946 Sept.19, 1947	5.86 6.70	234 1,610		Sept.28, 1958	5.24	612
1948	Aug. 5, 1948	6.67	1,520	1959	Aug. 3, 1959 Aug. 8, 1959	8.30 6.10	2,940 940
1949	Jan. 14, 1949 Jan. 25, 1949 Feb. 25, 1949	5.80 5.80 6.36	610 720 1,100		Aug. 11, 1959 Aug. 17, 1959 Aug. 25, 1959	6.18 5.35 4.23	1,020 705 210
1950	Oct. 18, 1949 Sept. 6, 1950	7.09 5.65	1,570 388	1960	Dec. 26, 1959 Jan. 13, 1960 Mar. 2, 1960	8.15 4.10 5.22	3,220 210 768
1951	Aug. 2, 1951 Aug. 29, 1951	7.85 12.95	1,180 33,600	1961	Aug. 23, 1961 Aug. 30, 1961	5.92 7.00	860 1,720
1952	Oct. 31, 1951 Dec. 31, 1951 Jan. 18, 1952 Mar. 11, 1952	6.62 7.45 7.03 7.35	6,000 8,020 6,710 7,680	1962	Feb. 13, 1962 Sept.21, 1962 Sept.27, 1962 Sept.28, 1962	7.90 8.35 9.15 7.88	2,320 2,850 3,800 2,290
a Anr	nual peak only.					·	· · - · -

4260. Bill Williams River near Alamo, Ariz. (Published as Williams River prior to 1944)

<u>Location</u>.--Lat 34°14', long ll3°35', in $SW^{\frac{1}{4}}_{u}NW^{\frac{1}{4}}_{u}$ sec.2, T.10 N., R.13 W., 1.5 miles downstream from Alamo, 2.0 miles downstream from Bullard Wash, and 6 miles downstream from confluence of Santa Maria and Big Sandy Rivers.

<u>Drainage area.--4,730</u> sq mi, approximately, of which about 400 sq mi is below confluence of Santa Maria and Big Sandy Rivers.

 $\frac{\text{Gage.--Recording.}}{1929}$. Datum of gage is 1,002.95 ft above mean sea level, datum of

Stage-discharge relation. -- Defined by current-meter measurements.

<u>Historical data.</u>--Flood of Sept. 6, 1939, reached a stage of 39.6 ft, from floodmarks (discharge, 86,000 cfs, from rating curve extended above 50,000 cfs on basis of slope-area measurement made just below confluence of Santa Maria and Big Sandy Rivers). Floodmarks indicate a previous stage of about 46 ft, which probably occurred in February 1937.

Remarks.--Peak discharges unaffected by small irrigation diversions above station. Base for partial-duration series, 900 cfs.

Peak stages and discharges Gage Gage Discharge Water Water Discharge Date Date height height (cfs) (cfs) vear vear (feet) (feet) a46 1937 February 1937 1952 Dec. 31, 1951 Jan. 18, 1952 19.65 37,600 15.77 27,300 1939 39.6 a86,000 Mar. 11, 1952 June 3, 1952 11.20 14,300 Sept. 6, 1939 1940 Feb. 3, 1940 6.75 2,700 7.00 Oct. 5, 1940 Dec. 18, 1940 6.1 1,340 1941 1953 Aug. 28, 1953 5.35 193 5.86 1,010 Mar. 23, 1954 Mar. 27, 1954 Aug. 4, 1954 18.5 17.85 1954 Dec. 25, 1940 32,900 34,700 7.15 Dec. 31, 1940 9.6 9,110 6,250 Jan. 12, 1941 6.95 8.35 1,000 5,330 4, 6.46 3,200 Jan. 25, 1941 2,880 Feb. 8, 1941 6.31 1,550 1955 July 24, 1955 5.75 Feb. 21, 1941 3, 1955 9.5 8,790 Aug. 3, 1955 Aug. 13, 1955 4.06 1,130 Feb. 25, 1941 11.2 14,100 4.84 1,790 Mar. 2, 1941 22.5 44,800 Aug. 16, 1955 4.50 1,480 4.85 Aug. 17, 1955 1,800 Mar. 14, 1941 23.0 46,000 32,800 Apr. 13, 1941 17.8 Aug. 18, 1955 6.2 3,700 4.50 July 18, 1941 7.98 7.50 Aug. 20, 1955 1,480 Aug. 10, 1941 Sept.13, 1941 3,150 Aug. 21, 1955 4.50 1,480 13,500 Aug. 23, 1955 6.6 6.55 4,610 Aug. 24, 1955 4,480 1942 Jan. 14, 1942 6.28 407 Aug. 26, 1955 6.43 4,200 Mar. 5, 1943 2,480 1956 July 24, 1956 162 1943 7.20 3.30 Aug. 13, 1957 Aug. 19, 1957 Aug. 20, 1957 1957 5.40 2,590 1944 Feb. 24, 1944 10.65 11,000 Mar. 6, 1944 Mar. 14, 1944 5,470 4,390 5.07 9.18 1,920 8.65 10.40 12,100 17, 1944 9.10 6,780 Mar. 1958 Oct. 12, 1957 5.00 2,310 1,080 1945 5, 1945 7.01 Oct. 31, 1957 3.99 4.71 1,110 2,540 Mar. Mar. 13, 1945 Mar. 16, 1945 Mar. 26, 1945 4, 1957 7.29 2,250 Nov. 7,380 5, 1958 Feb. 4.55 2,210 4,860 Feb. 5, 1958 5.28 7.98 4,340 Mar. 17, 1958 5.67 6,180 1946 Dec. 24, 1945 July 25, 1946 930 Mar. 22, 1958 10.00 13,000 Apr. 3, 1958 Apr. 4, 1958 Sept.28, 1958 4.80 5.80 3.57 6.28 972 3,600 4,350 1,030 7,290 1947 Dec. 28, 1946 9.22 Aug. 8, 1947 Sept.19, 1947 2,110 Aug. 3, 1959 Aug. 11, 1959 Aug. 18, 1959 8.12 4,650 1959 4.70 2,450 4.30 1,880 1948 Aug. 5. 1948 7.00 2.070 4.99 2,900 Jan. 14, 1949 Jan. 16, 1949 Feb. 25, 1949 1,190 1,280 2,900 1949 6.40 1960 Dec. 26, 1959 Mar. 2, 1960 5.30 3,420 6.45 7.35 1,800 4.00 Aug. 24, 1961 Aug. 30, 1961 Sept.13, 1961 1961 3.99 1,500 1950 July 23, 1950 6.08 958 3,82 1,290 1,630 Sept. 6, 1950 6.80 1,850 4.10 Aug. 3, 1951 Aug. 29, 1951 Feb. 13, 1962 Sept.21, 1962 Sept.27, 1962 Sept.28, 1962 8,400 6.48 1,340 1962 7.7 1951 30.8 65,100 4.09 5.05 2,000 Oct. 30, 1951 7.00 4,510 4.56 3,020

a Annual peak only.

4265. Bill Williams River at Planet, Ariz. (Published as Bill Williams River near Swansea, 1910-12, as Williams River near Swansea, 1913-15, and as Williams River at Planet, 1928-43)

Location. --Lat 34°16', long 113°59', in NE_{h}^{1} sec.36, T.11 N., R.17 W., 1 mile west of Planet and 6 miles upstream from water line of Havasu Lake at elevation 450 ft above mean sea level.

Drainage area. -- 5,140 sq mi, approximately.

Gage.--Nonrecording prior to Nov. 12, 1928; recording thereafter. Datum of gage is 556.33 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 51,000 cfs and extended above on basis of velocity-area study. Relation subject to large shifts.

<u>Historical data</u>.--Floods in 1891, 1916, and 1927 were estimated on basis of floodmarks at Striped Canyon, about 23 miles upstream.

 $\underline{\text{Remarks.}}\text{--Peak discharges not affected by small diversions.}$ Base for partial-duration series, 1,500 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date Date height height year (cfs) vear (cfs) (feet) (feet) 1891 Feb. 21, 1891 200,000 1937 Mar. 17, 1937 Sept.21, 1937 5.34 6,420 4.91 2,150 1916 Jan. 19, 1916 175,000 Mar. 2, 1938 4, 1938 1938 3,150 61,000 1927 Feb. 16, 1927 Mar. 125,000 10.7 Sept. 7, 1939 Sept.13, 1939 Sept.25, 1939 1929 Sept. 2, 1929 Sept. 4, 1929 6,00 6,270 25,000 1939 11.7 73,000 8.2 8.10 23,200 5.97 Mar. 18, 1930 1930 4.36 1,860 Aug. 9, 1930 Sept. 8, 1930 1940 4.73 11.15 1,640 64,000 Feb. 3, 1940 5.13 2,600 1941 Dec. 25, 1940 8.56 37,800 Jan. 1, 1941 Jan. 25, 1941 1931 Feb. 14, 1931 4.9 5,620 5.67 6,840 Aug. 5, 1931 Aug. 14, 1931 Sept. 3, 1931 4,560 12.3 80,000 5.70 6.Ŏ2 Feb. 13,800 2,520 8, 1941 5.19 2,100 6.75 4.25 Feb. 21, 1941 10,100 Feb. 25, 1941 7.43 21,800 Dec. 29, 1931 Feb. 9, 1932 Feb. 18, 1932 Mar. 1932 4.66 3,150 2, 1941 9.15 42,600 51,000 15,100 6, 1941 9.2 Mar. 5.69 5,340 6.87 Mar. 14, 1941 Apr. 14, 1941 8.57 35,400 7.97 26,400 1933 Mar. 4. 1933 4 91 107 Aug. 11, 1941 Sept.13, 1941 5.63 2,280 6.49 8.120 1934 Aug. 29, 1934 6.51 1.470 1942 Jan. 15, 1942 5,30 300 1935 Jan. 7, 1935 6.54 1,530 Jan. 13, 1935 6.75 7.50 1,950 1943 Mar. 5, 1943 5.67 1,580 Jan. 16, 1935 4,030 7, 1935 15,900 6,930 Feb. 1944 Feb. 24, 1944 8.92 7.19 10,800 Feb. 13, 1935 Mar. 5, 1935 7.11 Mar. 5, 1944 Mar. 17, 1944 Sept.15, 1944 6.16 4,520 6.23 4,780 2,260 6.48 4,490 5.64 1936 July 28, 1936 5.60 1,540 July 30, 1936 Aug. 9, 1936 6.11 2,270 2,900 1945 Mar. 11, 1945 5.24 2,590 Aug. 4,520 3,050 6.61 Mar. 16, 1945 Mar. 26, 1945 6.08 5.78 1937 Feb. 7, 1937 Feb. 15, 1937 13.1 92,500 27,500 8.2 1946 July 22, 1946 4.75 328

4305. Gila River near Gila, N. Mex.

Location. --Lat 33°03'45", long 108°32'20", in NW $_{\overline{u}}^1$ sec.30, T.14 S., R.16 W., on left bank at Hooker damsite, 1 mile upstream from Mogollon Creek, and 7 miles northeast of Gila.

Drainage area. -- 1,864 sq mi.

Gage.--Recording. At site 5 miles upstream at different datum prior to Dec. 31, 1928. On opposite bank 200 ft upstream at same datum Dec. 31, 1928, to Jan. 7, 1942. Datum of gage is 4,655.8 ft above mean sea level (from river-profile survey).

Stage-discharge relation.--1928: Defined by current-meter measurements below 320 cfs and extended above.

1929-41: Defined by current-meter measurements below 1,100 cfs and extended to 25,000 cfs on basis of logarithmic plotting and velocity-area studies.

 $1942\text{-}62\colon$ Defined by current-meter measurements below 4,800 cfs and extended to 12,000 cfs by logarithmic plotting.

Remarks.--Records prior to October 1930 collected by State engineer of New Mexico. Diversions for irrigation of 500 acres; effect on floodflows negligible. Base for partial-duration series, 600 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Aug. 23, 1928 Aug. 25, 1928	4.40 3.57	1,500 800	1941	Dec. 13, 1940 Dec. 25, 1940 Dec. 31, 1940	6.56 6.54 7.76	1,120 1,200 2,200
1929	July 27, 1929 Aug. 10, 1929 Aug. 25, 1929 Aug. 27, 1929 Sept.23, 1929	5.27 7.57 5.37 5.62 5.23	1,300 3,100 1,200 1,350 1,100		Jan. 29, 1941 Jan. 29, 1941 Feb. 12, 1941 Mar. 16, 1941 Apr. 27, 1941 Aug. 22, 1941	6.74 6.31 6.13 8.21 7.23 5.98	1,310 1,060 1,060 3,040 2,150 930
1930	Mar. 17, 1930 July 15, 1930 July 17, 1930	4.90 4.80 4.60	710 680 600		Aug. 29, 1941 Sept.29, 1941	5.34 17.19	608 25 , 400
	July 24, 1930 Aug. 12, 1930	4.65 8.16	600 3,300	1942	Aug. 15, 1942 Sept.12, 1942	4.50 4.44	930 874
1931	Feb. 15, 1931 Apr. 28, 1931 Aug. 10, 1931	5.48 5.54 5.61	1,000 1,040 1,050	1943	Mar. 6, 1943 Aug. 9, 1943	4.16 4.20	72 4 730
	Sept.19, 1931	5.17	780	1944	Aug. 18, 1944	6.32	2,500
1932	Feb. 11, 1932 Mar. 1, 1932	7.40 6.40	2,310 1,360	1945	Aug. 16, 1945	4.08	530
	Aug. 29, 1932	5.40	660	1946	Aug. 29, 1946	4.29	605
1933	Sept.15, 1933	5.52	732	1947	Aug. 22, 1947 Aug. 30, 1947	4.94 6.00	965 1,980
1934	Aug. 26, 1934	5.78	875	1948	Mar. 31, 1948	4.12	480
1935 1936	Sept. 3, 1935 July 2, 1936	5.36 6.70	615 1,520	1949	Dec. 28, 1948 Jan. 13, 1949	9.38 11.09	7,850 12,000
_	July 7, 1936 Sept.11, 1936	5.80 5.40	875 640		Jan. 25, 1949 Feb. 26, 1949 Mar. 8, 1949	4.15 4.97 8.37	940 1,440 5,980
1937	Feb. 8, 1937 Feb. 16, 1937	8.80 10.12	3,580 6,110	1050	Sept.15, 1949	4.93	1,020
	Mar. 17, 1937 Sept.11, 1937	9.08 5.35	4,120 760	1950	July 29, 1950	3.39	318
1933	Mar. 4, 1938 July 20, 1938	7.04 5.78	1,820	1951	Mar. 11, 1951 Jan. 14, 1952	2.75 7.03	105
	Sept. 1, 1938 Sept.12, 1938 Sept.16, 1938	5.27 6.60 5.30	611 1,440 625		Jan. 19, 1952 Apr. 3, 1952 June 3, 1952	7.98 3.34 3.65	4,870 635 840
1939	Mar. 23, 1939 Sept.15, 1939	5.55 6.40	630 1,190	1953	Mar. 10, 1953	4.09	930
1940	Oct. 8, 1939 Feb. 2, 1940 Feb. 23, 1940 Mar. 12, 1940	7.72 7.50 6.48 5.45	2,390 2,260 1,230 607	1954	Mar. 24, 1954 Aug. 21, 1954 Aug. 24, 1954 Sept.27, 1954	5.90 4.20 3.76 3.83	2,100 880 635 645
	Aug. 7, 1940 Sept.12, 1940	5.72 5.40	755 603	1955	July 20, 1955 Aug. 5, 1955	5.00 3.86	1,350 605

Peak stages and discharges of Gila River near Gila, N. Mex. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Aug. 11, 1955	4.18	750	1958	Sept.13, 1958	4.66	888
1956	Oct. 3, 1955	5.53	1,760	1959	Aug. 23, 1959	4.41	682
1957	Jan. 10, 1957 July 26, 1957 Aug. 6, 1957	4.04 3.95 4.50	695 683 880	1960	Jan. 12, 1960 Mar. 9, 1960	6.11 5.42	2,040 1,450
	Aug. 17, 1957 Aug. 23, 1957	4.38 5.70	854 1,740	1961	June 17, 1961	3.71	318
	Aug. 24, 1957	6.53	2,230	1962	Jan. 25, 1962 Feb. 15, 1962	5.26 5.95	1,120 1,830
1958	Oct. 9, 1957 Mar. 23, 1958 Apr. 17, 1958	4.63 7.64 5.55	703 4,120 1,600		July 27, 1962 Aug. 2, 1962 Sept.27, 1962	4.37 8.07 4.62	627 5,040 932

4310. Gila River near Cliff, N. Mex.

<u>Location</u>.--Lat 32°56'20", long 103°36'20", in $S_2^{\frac{1}{2}}$ sec.4, T.16 S., R.17 W., on downstream end of second pier from left bank of bridge on U.S. Highway 260, $1_2^{\frac{1}{2}}$ miles downstream from Bear Creek, $1_2^{\frac{1}{2}}$ miles south of Cliff, $2_2^{\frac{1}{2}}$ miles southwest of Gila, and $6_2^{\frac{1}{2}}$ miles upstream from Mangas Creek.

Drainage area. -- 2,438 sq mi.

Gage.--Recording; crest-stage gage since Oct. 1, 1951. Datum of gage is 4,454.5 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Ratings poorly defined by current-meter measurements below 7,200 cfs and extended above on basis of slope-area measurement.

Remarks.--Diversion for irrigation of about 4,500 acres; no appreciable effect on floodflows. Base for partial-duration series, 1,000 cfs. Only annual peaks are shown subsequent to 1950.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Aug. 16, 1942 Sept. 4, 1942 Sept.12, 1942	3.74 5.20 7.25	1,330 2,500 4,600	1948	Aug. 12, 1948 Sept.19, 1948	8.73 4.80	5,630 1,140
1943	Mar. 6, 1943 July 14, 1943 July 20, 1943	3.66 3.68 4.50	1,250 1,240 1,800	1949	Dec. 28, 1948 Jan. 14, 1949 Jan. 24, 1949 Mar. 8, 1949	10.40 12.60 4.30 9.63	10,000 17,200 1,660 7,830
1944	July 8, 1944 Aug. 9, 1944 Aug. 18, 1944 Sept. 5, 1944	4.79 5.14 6.80 4.81	2,000 1,920 4,020 1,580		July 9, 1949 July 15, 1949 Aug. 2, 1949 Sept. 8, 1949 Sept.14, 1949	4.45 4.49 6.17 6.37 6.75	1,580 1,620 3,050 3,250 3,550
1945	Aug. 1, 1945 Aug. 2, 1945 Aug. 16, 1945 Aug. 21, 1945	4.77 3.95 4.63 4.26	1,940 1,450 1,860 1,600	1950	July 24, 1950 July 29, 1950 Aug. 4, 1950 Sept.24, 1950	6.00 4.46 6.46 5.60	3,050 1,280 3,150 2,260
1946	Aug. 13, 1946 Sept. 4, 1946 Sept.12, 1946 Sept.27, 1946	6.12 8.33 5.32 4.52	2,810 5,830 1,960 1,250	1951 1952 1953 1954 1955	Oct. 4, 1950 Jan. 19, 1952 Aug. 20, 1953 Aug. 10, 1954 Aug. 4, 1955	3.62 9.32 8.79 10.85 10.88	684 7,510 6,620 10,800 10,900
1947	June 18, 1947 Aug. 14, 1947 Aug. 16, 1947 Aug. 22, 1947 Aug. 23, 1947 Aug. 30, 1947	5.14 7.14 4.36 7.20 7.95 5.39	1,820 3,900 1,140 3,640 4,740 1,640	1956 1957 1958 1959 1960	Aug. 13, 1956 August 1957 August 1958 Aug. 19, 1959 Jan. 12, 1960	6.74 11.79 9.24 10.83 9.34	3,500 13,700 7,370 10,800 7,540
1948	June 8, 1948 July 24, 1948	6.55 4.64	2,610 1,050	1961 1962	Sept. 8, 1961 Aug. 2, 1962	6.72 10.31	3,890 8,720

4315. Gila River near Red Rock, N. Mex.

Location.--Lat 32°43'30", long 108°40'30", in Wasec.23, T.18 S., R.18 W., on left bank a quarter of a mile upstream from lower end of a box canyon, 4 miles northeast of Red Rock, and 14 miles downstream from Mangas Creek.

Drainage area. -- 2,829 sq mi.

Gage.--Recording since July 17, 1909. Altitude of gage is 4,080 ft (from river-profile map).

Stage-discharge relation.--Poorly defined by current-meter measurements below 15,000 cfs. Maximum discharge for 1941 computed on basis of peak flow for station below Blue Creek near Virden.

Remarks. -- Records for 1915-30 collected by State engineer of New Mexico. Diversions for irrigation of about 5,000 acres; no appreciable effect on peak flows. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1906	Nov. 26, 1906		15,000	1941	Aug. 16, 1941	8.70	2,610		
1911	July 23, 1911	-	18,000		Aug. 21, 1941 Sept. 1, 1941 Sept.29, 1941	9.00 11.03 31.0	2,980 6,280 40,000		
1929	Aug. 7, 1929 Aug. 11, 1929	11.00 9.65	6,900 4,150	1942	Sept.12, 1942	9.25	3,940		
1930	Oct. 12, 1929 July 17, 1930 July 24, 1930	9.07 8.98 4.74	3,500 3,300 4,400	1943	July 20, 1943 Aug. 8, 1943	8.15 9.01	2,010 2,670		
	July 26, 1930 Aug. 8, 1930 Aug. 12, 1930	8.46 10.20 9.10	2,430 5,460 3,500	1944	Aug. 16, 1944 Aug. 18, 1944	9.95 10.20	3,720 4,120		
	Sept. 7, 1930	8 .9 8	3,300	1945	Aug. 16, 1945	8.3	1,810		
1931	July 3, 1931 Aug. 5, 1931 Aug. 9, 1931	11.46 8.82 10.77	7,800 3,940 6,500	1946	Aug. 13, 1946 Sept. 4, 1946	9.93 10.97	3,520 5,500		
1.070	Sept.18, 1931	9.48	4,500	1947	Aug. 22, 1947 Aug. 24, 1947	11.30 10.16	6,100 4,040		
1932	Feb. 11, 1932 Aug. 9, 1932	8.35 9.91	3,020 4,800	1948	Aug. 12, 1948	10.80	4,930		
1933	Aug. 29, 1933	9.10	2,890	1949	Dec. 28, 1948 Jan. 14, 1949	15.60 18.10	10,200 18,200		
1934	Oct. 15, 1933 July 18, 1934 Aug. 26, 1934	8.55 8.41 11.09	2,250 2,250 7,480		Jan. 25, 1949 Mar. 8, 1949 Aug. 2, 1949	9.58 13.12 9.70 9.25	3,010 8,500 3,420		
1935	Sept. 1, 1935 Sept.28, 1935	9.62 9.90	4,030 4,600		Sept. 8, 1949 Sept. 14, 1949	12.10	2,640 7,900		
1936	Sept.11, 1936 Sept.21, 1936	9.10 10.8	3,190 6,260	1950	July 21, 1950 July 29, 1950 Aug. 5, 1950 Sept.24, 1950	9.60 10.46 9.50 10.50	3,010 4,470 2,860 4,560		
1937	Feb. 8, 1937 Feb. 16, 1937	10.24 13.67	5,100 11,800	1951	Oct. 4, 1950	6.82	454		
1070	Mar. 17, 1937 July 21, 1937	10.80 7.59	7,000 2,140	1952	Jan. 14, 1952 Jan. 19, 1952	10.88 12.75	5,310 9,100		
1938	Mar. 5, 1938 July 19, 1938 Aug. 13, 1938 Sept. 1, 1938 Sept. 9, 1938	8.44 9.16 9.40 11.36 8.30	3,240 4,350 4,650 7,940 3,030	1953	Sept.23, 1952 Aug. 17, 1953 Aug. 20, 1953	10.47 10.85 12.10	4,930 5,220 7,700		
1939	Aug. 6, 1939 Sept.16, 1939	7.77 9.30	2,140 4,350	1954 ٩	Aug. 1, 1954 Aug. 5, 1954 Aug. 6, 1954	13.00 10.88 13.00	8,900 4,560 8,500		
1940	Oct. 8, 1939 Feb. 2, 1940	15.42 11.35	15,300 7,930	2055	Aug. 10, 1954 Aug. 21, 1954	14.24 13.38	10,400 8,500		
	Feb. 23, 1940 June 22, 1940 Aug. 15, 1940	8.27 8.41 8.08	. 2,750 3,030 2,820	1955	Oct. 4, 1954 Oct. 8, 1954 July 22, 1955 July 24, 1955	11.92 11.78 11.55 11.70	6,700 6,300 5,700 6,100		
1941	Jan. 1, 1941 Jan. 28, 1941 Feb. 8, 1941 Mar. 16, 1941 Apr. 27, 1941	11.07 9.67 9.46 9.85 8.64	5,310 3,920 3,630 4,150 2,550		July 26, 1955 July 28, 1955 Aug. 4, 1955 Aug. 20, 1955	10.60 12.90 13.15 10.60	3,670 9,100 9,500 3,670		

4320. Gila River below Blue Creek, near Virden, N. Mex. (Published as "at Virden Bridge, near Duncan, Ariz." prior to Aug. 1, 1931, and as "at Fuller's Ranch, near Duncan, Ariz." 1931-38)

<u>Location</u>.--Lat 32°38'55", long 108°50'45", in $SE_{\frac{1}{4}}^{\frac{1}{4}}SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.18, T.19 S., R.19 W., at head of canyon, $1_{\frac{1}{4}}^{\frac{1}{4}}$ miles downstream from Blue Creek, 10 miles east of Virden, and 16 miles upstream from State line.

<u>Drainage area.--3,203</u> sq mi, excluding Animas River basin; 3,272 sq mi at site 9 miles downstream.

Gage.--Recording at Virden Bridge, 9 miles downstream at altitude 3,770 ft (from topographic map), July 1927 to May 1931. Nonrecording at present site and datum June 1 to July 7, 1931; recording thereafter. Altitude of gage is 3,875 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 38,000 cfs. Relation for site 9 miles downstream subject to considerable shifting; defined by current-meter measurements below 4,400 cfs.

 $\underline{\text{Remarks.}\text{--Peak}}$ discharges unaffected by diversions above station. Base for partial-duration series, 1,900 cfs.

	Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1927	July 4, 1927	5.9	1,800	1941	Dec. 31, 1940	11.05	4,410		
1000	T1 00 1000	١ ـ ـ .			Feb. 8, 1941	9.22	2,780		
1928	July 26, 1928	5.54	1,630	1	Mar. 16, 1941 Apr. 28, 1941	9.53	3,510 2,150		
1929	July 30, 1929	8.85	5,700		July 20, 1941	9.33	3,260		
	Aug. 10, 1929	7.14	3,480	li .	Aug. 21, 1941	8.66	2,780		
	Sept.23, 1929	5.73	1,970	ll	Sept. 1, 1941 Sept. 29, 1941	8.58 25.78	2,620 41,700		
1930	Oct. 12, 1929	6.37	2,490		Sept.23, 1341	25.76	41,700		
	July 24, 1930	5.89	2,170	1942	Oct. 4, 1941	7.30	2,260		
	July 27, 1930	6.52	2,780		Aug. 22, 1942	7.60	2,530		
	Aug. 6, 1930 Aug. 8, 1930	6.6 8.8	3,090 5,920	ll.	Sept.13, 1942	8.18	3,140		
	Aug. 11, 1930	9.43	7,400	1943	Sept.27, 1943	6.87	1,600		
1931	July 3, 1931	6.29	3,050	1944	Mag. 8, 1944	7.52	2,140		
	Aug. 3, 1931	13.6	8,000		Aug. 19, 1944	9.03	4,010		
	Aug. 10, 1931 Sept. 6, 1931	8.91 9.16	3,320 3,570		Sept. 5, 1944	7.6	2,440		
1932	Feb. 11, 1932	8,46		1945	Aug. 11, 1945	10.0	5,370		
1332	July 30, 1932	12.35	2,880 6,800	1946	Oct. 8, 1945	13.07	10,600		
	Aug. 10, 1932	8.3	2,750	-0	Aug. 14, 1946	9.47	4,670		
1077	0-4 10 1070	10.00	5 700		Sept. 5, 1946	8.0	2,850		
1933	Oct. 12, 1932 Feb. 26, 1933	10.82 9.16	5,320 3,570	1947	Aug. 22, 1947	8.46	3,400		
	June 21, 1933	7.45	1,950	131	Aug. 22, 131/	0.40	5,100		
	Aug. 29, 1933	9.4	3,810	1948	Aug. 12, 1948	8.10	2,240		
	Sept. 8, 1933	11.1	5,650	1949	Dec. 28, 1948	13.09	6,040		
1934	Apr. 15, 1934	11.0	5,540	1343	Jan. 14, 1949	17.43	15,600		
	Aug. 21, 1934	8.60	3,020		Jan. 25, 1949	8.06	2,260		
	Aug. 26, 1934	13.50	8,920	Ī	Mar. 8, 1949	12.55	6,230		
1935	Sept. 2, 1935	7.94	2,300		July 11, 1949 July 24, 1949	8.4 14.3	2,460 8,970		
	Sept.27, 1935	13.3	8,600		July 31, 1949	8.05	2,190		
1936	T 13 3070	2.05	-		Sept.15, 1949	9.48	3,260		
1936	June 11, 1936 Sept.11, 1936	9.25 7.91	3,600 2,240	1950	Sept.24, 1950	8.05	2,190		
	Sept.21, 1936	8.15	2,500		1		· ·		
1937	Feb. 8, 1937	9.55	3,820	1951	Aug. 28, 1951	4.40	440		
1357	Feb. 17, 1937	14.65	9,070	1952	Jan. 15, 1952	9.54	3,490		
	Mar. 18, 1937	10.83	5,030		Jan. 19, 1952	12.06	6,100		
	Aug. 24, 1937	8.36	2,290		Sept.23, 1952	10.73	4,260		
1938	July 20, 1938	8.5	2,530	1953	Aug. 21, 1953	9.55	3,330		
	July 28, 1938	8.44	2,180						
	Aug. 6, 1938 Aug. 31, 1938	8.86 12.28	2,630	1954	Mar. 24, 1954 June 30, 1954	8.22 12.42	1,940 4,950		
	Aug. 31, 1330	12.20	6,400		July 12, 1954	10.15	3,160		
1939	Sept.16, 1939	7.71	1,630	1	July 19, 1954	12.78	5,300		
1940	Oat 7 1070	15 25	30 000]	July 25, 1954	8.95	2,380		
1940	Oct. 7, 1939 Feb. 2, 1940	15.75 10.55	10,000 4,580		Aug. 2, 1954 Aug. 5, 1954	9.90 8.21	2,990 1,940		
	Sept. 6, 1940	15.88	11,000		Aug. 7, 1954	10.28	3,260		
3043					Aug. 8, 1954	13,04	5,560		
1941	Dec. 25, 1940	8.18	2,140	1	Aug. 9, 1954	8.97	2,390		

Peak stages and discharges of Gila River below Blue Creek, near Virden, N. Mex. -- Con.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Pischarge (cfs)
1954	Aug. 10, 1954	12.06	4,380	1958	Oct. 10, 1957	9.1	2,140
	Aug. 17, 1954	8.30	1,990	l	Mar. 18, 1958	9.7	2,440
	Aug. 21, 1954	14.0	6,670		Mar. 23, 1958	12.45	4,550
	Aug. 23, 1954	12.10	4,660		Apr. 18, 1958	8.40	2,090
	Sept.25, 1954	8.38	2,040		Aug. 22, 1958	10.35	3,300
1055	0.4 0 7054				Aug. 25, 1958	9.2	2,530
1955	Oct. 9, 1954	8.23	1,950	i	Sept.13, 1958	10.1	3,130
	July 21, 1955	8.28	1,960			į	
	July 22, 1955	8.78	2,200	1959	Oct. 13, 1958	9.2	2,530
	July 25, 1955	9.37	2,490	1	Aug. 13, 1959	18.2	16,400
	July 28, 1955	12.9	5,280	ł	Aug. 15, 1959	12.2	4,750
	Aug. 5, 1955	10.09	2,930	ľ	Aug. 20, 1959	10.5	3,410
1956	1 37 3050			ŀ	Aug. 21, 1959	9.8	2,920
1920	Aug. 13, 1956	9.42	2,660		Aug. 22, 1959	8.7	2,230
1957	Tu3 04 3057	0.07	0 710	1	Aug. 25, 1959	11.2	3,920
1957	July 24, 1957	8.83	2,310	Į.	Aug. 28, 1959	9.3	2,590
	July 25, 1957	8.76	2,270	7.000	7- 30 3000		
	July 26, 1957 Aug. 5, 1957	13.4	5,580	1960	Jan. 12, 1960	12.40	5,220
		14.38 13.0	6,710	1961	Aug. 15, 1961	8.19	1,920
	Aug. 6, 1957 Aug. 8, 1957	10.05	5,170	1962	D	0.40	-
	Aug. 18, 1957	12.7	2,860	1962	Dec. 12, 1961	8.40	1,930
	Aug. 22, 1957	9.5	4,880		Jan. 25, 1962	10.32	3,280
	Aug. 25, 1957	8.9	2,570	1	Feb. 15, 1962	8.83	2,340
	Aug. 23, 1957 Aug. 31, 1957	10.8	2,220 3,420	1	Aug. 2, 1962	10.30	3,270
	Aug. 31, 195/	10.6	3,420	L	Sept.26, 1962	11.20	3,920

4380. Gila River at New Mexico-Arizona State line, near Virden, N. Nex.

Location.--Lat 32°41'10", long 109°03'05", in $NE_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.3, T.9 S., R.32 E., Gila and Salt River meridian ($NE_{\overline{u}}^{1}NW_{\overline{u}}^{1}$ sec.6, T.19 S., R.21 W., New Merico meridian projected west of State line), 790 ft downstream from State line and 3 miles west of Virden.

Drainage area. -- 3,360 sq mi, approximately.

Gage.--Recording. Altitude of gage is 3,680 ft (from topographic map).

Stage-discharge relation. -- Poorly defined by current-meter measurements below 6,400 cfs and extended above on basis of maximum discharge for 1941, which was estimated on basis of peak flow for station below Blue Creek near Virden.

Bankfull stage .-- 7 ft.

Remarks.--Diversions for irrigation of about 12,500 acres; slight effect on peak flows. Base for partial-duration series, 1,500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Aug. 5, 1939 Sept.14, 1939 Sept.16, 1939	3.94 3.78 3.38	2,090 1,920 1,500	1944	July 5, 1944 July 23, 1944 Aug. 11, 1944 Aug. 19, 1944	4.38 5.52 4.37 5.49	2,040 3,280 1,860 3,410
1940	Oct. 7, 1939 Feb. 3, 1940 Sept. 6, 1940	7.40 6.12 7.47	7,700 3,720 6,540	1945	Aug. 11, 1945	5.86	3,000
1941	Dec. 25, 1940 Jan. 1, 1941 Jan. 13, 1941 Jan. 29, 1941 Feb. 8, 1941	4.40 6.89 4.66 4.74 5.52	1,500 4,240 1,680 1,820 2,580	1946	Oct. 9, 1945 Aug. 14, 1946 Aug. 23, 1946 Aug. 29, 1946 Sept. 5, 1946	6.96 5.90 4.78 5.73 5.04	5,410 3,350 1,500 3,100 2,080
	Mar. 16, 1941 Apr. 28, 1941 July 20, 1941 Aug. 22, 1941	6.23 5.14 4.93 5.12	3,540 2,420 2,060 2,310	1947	Aug. 23, 1947 Aug. 30, 1947 Aug. 13, 1948	4.97 5.30 4.88	1,960 2,280 1,560
1942	Sept. 1, 1941 Sept.29, 1941	5.20 13.64	2,480 39,500	1949	Dec. 29, 1948 Jan. 14, 1949	7.95 10.00	6,350 14,800
1942	Sept.13, 1942 July 1, 1943	4.11 4.16	1,720	}	Mar. 8, 1949	7.18	6,230

4420. Gila River near Clifton, Ariz. (Published as "at Guthrie" 1910-18)

- Location. --Lat 32°57'50", long 109°18'15", in $SW_{1}^{1}SW_{1}^{1}$ sec.30, T.5 S., R.30 E., 1,100 ft upstream from bridge on former U.S. Highway 666, 6 miles upstream from San Francisco River, and 7 miles south of Clifton.
- Drainage area.--4,010 sq mi. For site at Guthrie, 1910-18, drainage area is 3,967 sq mi.
- <u>Gage</u>,--Nonrecording prior to May 16, 1914; recording thereafter. At sites $\frac{5}{2}$ miles upstream at Guthrie at different datums prior to July 12, 1918. At site 1,100 ft downstream at datum 4.03 ft lower March 1928 to June 1948. Datum of gage is 3,339.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1959.
- Stage-discharge relation.--Defined by current-meter measurements. Ratings at all sites subject to considerable shifting.
- $\underline{\text{Historical data}}$.--Studies by Corps of Engineers, U.S. Army, indicate that the flood of Sept. 29, 1941, was the greatest since 1891.
- Remarks.--Peak discharges not materially affected by irrigation diversions.

 Base for partial-duration series, 2,500 cfs. Only annual paks are shown prior to 1928.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	July 25, 1911	15.0	16,000	1937	Sept.22, 1937	10.16	3,820
1912	Mar. 11, 1912	16.5	21,000	1938	July 21, 1938 Aug. 6, 1938	9.18 11.80	2,770 5,930
1913	Sept.22, 1913	8.2	1,200		Sept. 2, 1938	9.52	3,270
1914	Aug. 6, 1914	9.4	5,700	1939	July 22, 1939 Aug. 5, 1939	9.52 13.45	3,100 8,670
1915	Dec. 20, 1914	11.4	12,000		Sept.16, 1939	11.16	4,680
1916	Jan. 18, 1916	10.2	7,600	1940	Oct. 8, 1939 Feb. 3, 1940	12.05 9.55	6,300 3,300
1917	Oct. 15, 1916	14.7	19,500	1	Sept. 6, 1940	9.32	2,920
1928	July 31, 1928	9.40	2,870	1941	Jan. 1, 1941 Mar. 17, 1941	10.05 9.21	3,750 3,000
1929	July 24, 1929 July 27, 1929 July 30, 1929	8.96 11.08 14.5	2,530 5,600 13,200	-	July 21, 1941 Sept. 1, 1941 Sept.29, 1941	9.61 9.57 20.12	3,200 3,200 28,200
	Aug. 11, 1929 Aug. 13, 1929 Sept.23, 1929	10.04 9.43 11.5	3,530 3,030 6,500	1942	Aug. 6, 1942 Sept.12, 1942	8.82 8.68	3,280 3,130
1930	Oct. 13, 1929 July 17, 1930 July 19, 1930 July 26, 1930 Aug. 9, 1930	9.12 10.8 10.27 10.47 10.18	2,670 5,240 4,510 4,780 4,380	1943	June 30, 1943 July 25, 1943 Aug. 10, 1943 Sept.27, 1943	9.40 8.41 10.52 10.82	4,260 2,830 6,230 6,770
	Aug. 11, 1930	11.5	6,300	1944	Aug. 19, 1944	8.38	2,610
1931	Aug. 3, 1931 Aug. 5, 1931 Aug. 10, 1931 Sept. 4, 1931	9.74 10.55 10.33 10.95	4,080 5,880 5,760 6,900	1945	July 31, 1945 Aug. 8, 1945 Aug. 11, 1945	8.58 9.59 9.48	2,780 4,540 4,360
1932	Sept. 7, 1931 July 9, 1932	8.98 11.15	2,630 4,500	1946	Oct. 9, 1945 Aug. 9, 1946 Aug. 16, 1946	10.26 8.87 10.45	5,800 3,200 4,270
	July 30, 1932 Aug. 9, 1932	11.10 9.70	4,470 3,030	1948	Aug. 3, 1948	5 08	1,090
1933	Sept. 9, 1933 Sept.11, 1933 Sept.14, 1933	10.67 9.17 9.98	4,000 2,550 3,290	1949	Dec. 29, 1948 Jan. 15, 1949 Mar. 9, 1949 July 24, 1949	9.17 15.3 9.2 6.2	3,980 13,900 5,940 2,990
1934	Aug. 26, 1934	16.0	17,000		Sept.14, 1949	9.6	6,660
1935	Aug. 31, 1935	10.22	3,100	1950	July 30, 1950	4.80	1,680
1936	Aug. 28, 1936	10.95	4,300	1951	Aug. 3, 1951	7.75	4,600
1937	Feb. 18, 1937 Mar. 18, 1937	12.72 9.81	7,450 3,550	1952	Jan. 20, 1952 Sept.24, 1952	7.98 6.06	4,280 2,900
	Aug. 6, 1937 Aug. 23, 1937 Sept.10, 1937	9.28 8.96 10.0	2,850 2,550 3,600	1953	July 30, 1953	7.38	3,700

		Gage	I			Gage	T
Water year	Date	height (feet)	Discharge (cfs)	Water year	Date	height (feet)	D'scharge (cfs)
1954	July 2, 1954 July 20, 1954 July 22, 1954	6.40 7.05 8.82	2,720 3,370 4,780	1957.	Aug. 29, 1957 Aug. 31, 1957	11.72 8.87	8,070 3,320
	Aug. 11, 1954 Aug. 21, 1954 Aug. 23, 1954 Aug. 24, 1954	8.25 7.28 9.75 6.90	4,280 3,050 6,000 2,670	1958	Mar. 24, 1958 July 19, 1958 Aug. 22, 1958 Sept.13, 1958	9.5 7.6 7.85 7.7	3,980 3,070 3,370 3,190
1955	Oct. 9, 1954 July 11, 1955 July 23, 1955 July 29, 1955 Aug. 12, 1955 Aug. 20, 1955 Aug. 26, 1955	6.96 9.95 11.9 7.89 7.75 8.38 8.73	2,570 6,280 9,450 3,600 3,440 4,140 4,560	1959	Aug. 4, 1959 Aug. 7, 1959 Aug. 14, 1959 Aug. 17, 1959 Aug. 20, 1959 Aug. 25, 1959 Aug. 26, 1959 Aug. 28, 1959	7.9 7.7 8.05 9.1 7.3 9.2 9.4 8.1	3,350 3,070 3,560 5,130 2,630 5,290 5,610 3,630
1956	Oct. 3, 1955 Oct. 4, 1955	12.33 13.29	10,800 12,700	1960	Jan. 13, 1960	8.85	4,000
1957	July 27, 1957 Aug. 7, 1957	8.34 9.05	2,710 3,560	1961	Aug. 13, 1961	7.40	2,400
	Aug. 23, 1957	8.95	3,420	1962	Sept.26, 1962	11.59	8,980

Peak stages and discharges of Gila River near Clifton, Ariz. -- Continued

4426.5. Trout Creek near New Mexico-Arizona State line, near Luna, N. Mex.

<u>Location</u>.--Lat 33°55', long 109°02', in $W^{\frac{1}{2}}$ sec.34, T.4 S., R.21 W., on culvert on Luna-Underwood Lake road, 1 mile east of State line and 8 miles northwest of Luna.

Drainage area. -- 9.9 sq mi, approximately.

Gage .-- Crest-stage gage. Altitude of gage is 8,250 ft (from topographic map).

Stage-discharge relation. --Defined by three current-meter measurements below gage height 8.17, and extended above on basis of conveyance comparison at gage height 8.52 ft.

Remarks. -- There are no known diversions above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958 1959	-	8.50 8.31	36 26	1961 1962	April 1961	8.12 8.48	17 35
1960	March 1960	8.52	39	1302		0.40	33

4426.6. Trout Creek near Luna, N. Mex.

<u>Location</u>.--Lat 33°51', long 108°58', in NW_{4}^{1} sec.29, T.5 S., R.20 W., on right bank 500 ft downstream from bridge on Luna-Red Hill road and 2.6 miles north of Luna.

Drainage area. -- 32 sq mi, approximately.

Gage. -- Crest-stage gage. Altitude of gage is 7,400 ft (from topographic map).

Stage-discharge relation.--Defined by three current-meter measurements below gage height 1.5 ft and extended above on basis of three indirect measurements at gage heights 1.82, 2.00, and 4.20 ft.

Remarks.--There are no known diversions above station. Only annual peaks are shown.

Peak stages and discharges of Trout Creek near Luna, N. Mex.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	e	Gage height (feet)	Discharge (cfs)
1954 1955	Aug. 20, 1955	1.10 4.20	35 1,830	1959 1960	- March	1960	1.82 2.00	139 212
1956 1957 1958	, - -	.49 3.27 1.96	8 870 176	1961 1962	April -	1961	1.32 1.81	56 138

4426.9. Tularosa River near Aragon, N. Mex.

 $\frac{\text{Location.--Lat } 33°54', \text{ long } 108°30', \text{ in } NW_{4}^{1} \text{ sec.3, T.5 S., R.16 W., on right } \\ \text{bank, about } 100 \text{ ft right of State Highway } 12 \text{ and } 2 \text{ miles northeast of Aragon.}$

Drainage area. -- 89 sq mi, approximately.

Gage .-- Crest-stage gage. Altitude of gage is 6,900 ft (from topographic map).

Stage-discharge relation. -- Defined by seven current-meter measurements and a conveyance comparison.

Remarks.--There are no known diversions above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1955	-	4.04	22	1959 1960	July 1959 March 1960	4.04 4.29	22 28			
1956	-	3.54	. 9	K	1	1				
1957	-	4.12	24	1961	April 1961	4.07	23			
1958	L	4.15	25	1962		4.21	26			

4427.4. Tularosa River near Reserve, N. Mex.

Location.--Lat 33°44', long 108°42', in SE^{1}_{π} sec.33, T.6 S., R.18 W., on left bank 150 ft west of Eagle Peak Lookout Road and 3.3 miles northeast of Reserve.

Drainage area. -- 426 sq mi.

Gage. -- Crest-stage gage. Altitude of gage is 5,900 ft (from topographic map).

Stage-discharge relation.--Defined by six current-meter measurements below gage height 1.31 ft and extended above on basis of two indirect measurements at gage heights 3.74 and 4.10 ft.

Remarks. -- Any diversions above the station do not materially affect flood peaks. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	July 1956	-	2,280	1960	-	1.93	181
1957	Aug. 24, 1957	-	526	1			
1958	September1958	-	177	1961	September1961	1.97	189
1959	July 19, 1959	4.10	1,010	1962	·	1.84	165

4440. San Francisco River near Glenwood, N. Mex.

Location. --Lat 33°15'05", long 108°52'40", in $NE_{\frac{1}{4}}^{\frac{1}{4}}NW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.23, T.12 S., R.20 W., on left bank a quarter of a mile upstream from hot springs, 5 miles south of Glenwood, and 6 miles downstream from Whitewater Creek.

Drainage area. -- 1,653 sq mi.

<u>Gage.</u>--Recording. At site $4\frac{1}{2}$ miles upstream at datum 98.82 ft higher prior to Feb. 15, 1934. Datum of gage is 4,552.06 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Prior to 1934: Poorly defined by current-meter measurements below 600 cfs and extended to 4,400 cfs on basis of maximum discharge for 1952 from rating for succeeding site and the gage height at this site from high-water marks.

site from high-water marks.

1934-62: Fairly well defined by current-meter measurements below 3,400 cfs and extended above on basis of slope-area measurement at 7,800 cfs.

Remarks.--Records prior to October 1930 collected by State engineer of New Mexico. Diversions fcr irrigation of about 2,000 acres; slight effect on peak flows. Base for partial-duration series, 800 cfs.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1928	July 18, 1928 July 24, 1928 July 28, 1928 Aug. 11, 1928 Aug. 21, 1928 Aug. 24, 1928	5.25 6.30 4.07 4.23 5.55 4.14	1,610 2,480 880 940 1,850 880	1940	Aug. 4, 1940 Aug. 13, 1940 Aug. 15, 1940 Aug. 17, 1940 Sept. 5, 1940	3.71 6.74 6.60 3.66 4.50	860 3,250 3,160 820 1,420
1929	July 20, 1929 July 27, 1929 July 29, 1929 Aug. 1, 1929 Aug. 7, 1929 Aug. 12, 1929 Aug. 30, 1929	4.3 4.30 5.19 4.48 4.75 6.10 4.40 4.13	970 940 1,570 1,090 1,260 2,300 1,000 850	1941	Dec. 12, 1940 Dec. 25, 1940 Dec. 31, 1940 Jan. 28, 1941 Feb. 7, 1941 Mar. 15, 1941 Apr. 27, 1941 May 2, 1941 Sept. 29, 1941	3.81 6.64 6.27 5.24 4.31 6.19 5.40 4.90 4.87	920 3,160 2,890 2,000 1,280 2,800 2,200 1,800 1,690
1930	July 9, 1930 July 17, 1930 Aug. 11, 1930	3.86 5.5 6.25	850 1,850 2,460	1942	Dec. 11, 1941 July 22, 1942 Aug. 12, 1942	5.64 3.80 4.23	2,280 920 1,240
1931	July 3, 1931 July 31, 1931 Aug. 4, 1931 Aug. 19, 1931 Aug. 22, 1931 Sept. 6, 1931 Sept. 16, 1931	4.84 4.55 4.75 4.40 4.35 6.73 8.16	1,260 960 1,140 1,050 1,020 2,860 4,400	1943 1944 1945	July 15, 1943 Aug. 8, 1944 Aug. 9, 1944 Sept.27, 1944 July 31, 1945	3.71 4.70 4.10 5.32 4.00	1,580 1,130 2,040
1932	Feb. 10, 1932 July 30, 1932 Aug. 10, 1932	7.00 4.0 4.4	3,200 875 1,110	1946	Aug. 11, 1945 Aug. 21, 1945 July 19, 1946	4.11 7.02 3.97	977 3,520 960
1933	Feb. 27, 1933 Sept. 8, 1933	4.09 4.63	1,040 1,340		Aug. 9, 1946 Aug. 26, 1946 Aug. 29, 1946 Sept.11, 1946	4.83 5.70 4.18 4.06	1,580 2,320 1,100 1,000
1934	Nov. 29, 1933 July 23, 1934 Aug. 27, 1934 Aug. 30, 1934	4.10 5.05 6.64 4.20	1,130 1,780 3,150 1,100	1947	Oct. 29, 1946 Aug. 23, 1947	4.86 4.88	1,530 1,530
1935	Aug. 5, 1935	3.75	850	1948	July 23, 1948	3.70	720
1936	Sept.27, 1936	3.51	735	1949	Dec. 28, 1948 Jan. 13, 1949 Jan. 24, 1949	4.71 10.74 4.71	1,490 7,800 1,710
1937	Feb. 7, 1937 Feb. 16, 1937 Mar. 18, 1937	8.07 6.10 4.27	4,710 2,700 1,180		Mar. 8, 1949 July 21, 1949 July 24, 1949 Aug. 2, 1949	6.49 5.55 4.34 3.54	3,010 2,370 1,440 875
1938	Mar. 4, 1938 Sept.15, 1938	4.24 4.89	1,210 1,690	1950	July 8, 1950 Sept.30, 1950	3.41 5.63	839 2,430
1939	Apr. 6, 1939 Aug. 3, 1939 Aug. 14, 1939	3.74 3.89 3.70	984 1,020 818	1951	Aug. 4, 1951 Aug. 26, 1951	4.12 3.95	1,320 1,160
1940	July 25, 1940 Aug. 1, 1940	7.32 5.55	3,850 2,280	1952	Jan. 14, 1952 Jan. 19, 1952	7.78 9.02	4,310 5,410

Peak stages and discharges of San Francisco River near Glenwood, N. Mex .-- Continued Cage Gage Water Discharge Water Discharge Date height Date height (cfs) (cfs) year year (feet) (fest) 1952 Aug. 24, 1952 Sept.23, 1952 4.80 Aug. 5.05 1,170 7, 1957 1,170 1957 1,140 4.75 Aug. 13, 1957 5.68 7.20 7.22 1,690 Aug. 16, 1957 Aug. 20, 1957 Aug. 25, 1957 Aug. 30, 1957 3,040 1953 Aug. 20, 1953 3.80 660 7.27 3,230 1954 Mar. 24, 1954 July 21, 1954 7.20 3,030 4.57 1,100 4.60 1,780 Aug. 4.80 1,390 1958 7.07 6.37 4.32 1, 1954 Mar. 23, 1958 Apr. 17, 1958 2,870 2,260 3,430 1,500 1,360 3,030 2, 1954 Aug. 7.10 Aug. 31, 1958 Sept.10, 1958 Sept.13, 1958 Aug. 4, 1954 5.04 1,040 1,310 4.80 Aug. 6, 1954 4.90 7, 1954 Aug. 6.80 6.45 2,410 Aug. 9, 1954 Aug. 12, 1954 1,740 5.40 1959 1,260 4.80 1,140 July 20, 1959 4.85 Aug. 6, 1959 Aug. 19, 1959 Aug. 27, 1959 2,760 4,250 6.75 8.27 2,760 1,720 3,110 July 12, 1955 July 24, 1955 July 30, 1955 Aug. 5, 1955 1955 6.95 5.70 7.29 6.10 2,180 4.55 Nov. 1,030 902 1960 1, 1959 4.52 Dec. 26, 1959 Jan. 12, 1960 Aug. 8, 1955 Aug. 12, 1955 2,330 3,070 4.68 1,000 6.24 1,390 1,330 3,350 7.02 4.37 5.20 5.07 Aug. 20, 1955 Aug. 26, 1955 Mar. 9. 1960 960 7.30 Aug. 17, 1961 Sept. 9, 1961 Sept.11, 1961 2,940 1961 6.94 1956 4, 1955 6.55 2,400 5.45 1,680 8.0 4,050 May 7, 1957 July 17, 1957 Aug. 1, 1957 1957 May 4.85 900 Oct. 4.23 5.40 8.75 862 1,140 1962 9, 1961 Feb. 16, 1962 4,590 4.90 1,460

4445. San Francisco River at Clifton, Ariz.

Location.--Lat 33°03'00", long 109°17'45", in $SM_{\overline{4}}^2SE_{\overline{4}}^1$ sec.30, T.4 S., R.30 E., at Railroad Boulevard Bridge at Clifton, $8\frac{1}{2}$ miles upstream from mouth.

Drainage area. -- 2,766 sq mi.

Gage.--Recording. At site 60 ft upstream May 15, 1914, to Jan. 19, 1916, and at site 2,000 ft upstream June 11, 1916, to July 12, 1918, at different datums. At present site at datum 4.49 ft lower July 20, 1927, to Apr. 6, 1959. At site 1,140 ft downstream at datum 5.37 ft lower Apr. 7, 1959, to Mar. 23, 1961. Datum of gage is 3,436.16 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements. Discharge for peak of Jan. 19, 1916, derived from slope-area measurement computed in 1940 on basis of data compiled from 1916 records.

<u>Historical data</u>.--Report by Frank H. Olmstead (Senate Document 436, dated 1919) lists flood of 1891 as second highest known (discharge not determined), that of Dec. 3, 1906, as greatest (discharge, 143,450 cfs), and that of Oct. 14, 1916, as third highest (discharge 107,870 cfs). Methods used in computation of these discharges figures are not known.

 $\frac{\text{Remarks.--No significant regulation or diversion above station.} \quad \text{Base for partial-duration series, 2,000 cfs.}$

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1907	Dec. 3, 1906	-	al43,450	1929	Aug. 2, 1929 Aug. 8, 1929	7.55 8.78	2,450 3,450
1916	Jan. 19, 1916	16.8	ab90,000	4	Aug. 11, 1929 Aug. 13, 1929	7.80 9.09	2,650 3,740
1917	Oct. 14, 1916	19.7	a107,870	4	Sept.23, 1929	10.1	5,200
1927	Aug. 9, 1927 Sept.12, 1927	7.1 9.4	2,090 4,060	1930	Oct. 16, 1929 July 18, 1930 Aug. 8, 1930	7.44 8.05 7.61	2,360 2,860 2,500
1928	July 15, 1928 July 26, 1928	8.7 7.74	3,380 2,600		Aug. 11, 1930	8.75	3,420
	July 31, 1928 Aug. 14, 1928 Aug. 28, 1928	7.97 7.69 7.67	2,790 2,560 2,930	1931	Feb. 15, 1931 July 4, 1931 Aug. 9, 1931	8.53 7.97 8.24	3,270 2,830 3,030

a Annual peak only.

b Estimated.

Peak stages and discharges of San Francisco River at Clifton, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1931	Aug. 30, 1931 Sept.17, 1931	7.77 7.53	2,680 2,520	1950	July 27, 1950	5.55	825
	Sept.17, 1931 Sept.19, 1931 Sept.29, 1931	8.09 8.6	2,910 3,330	1951	Aug. 29, 1951	5.31	735
	Sept.30, 1931	8.58	3,310	1952	Jan. 14, 1952 Jan. 19, 1952	12.00 12.65	11,300 15,800
1932	Feb. 10, 1932 Mar. 1, 1932 July 30, 1932 Aug. 9, 1932	12.0 8.47 7.24 11.5	10,000 3,220 2,260 8,640	1953	July 15, 1953 Aug. 1, 1953 Aug. 18, 1953	7.50 7.27 9.85	2,510 2,290 6,090
1933	Feb. 26, 1933 July 23, 1933 Sept. 9, 1933 Sept.14, 1933	8.10 9.1 7.92 7.67	2,920 3,800 2,550 2,360	1954	Mar. 24, 1954 Aug. 2, 1954 Aug. 2, 1954 Aug. 4, 1954	11.10 8.40 8.92 7.40	7,240 3,400 3,990 2,370
1934	Aug. 26, 1934	12.5	all,700		Aug. 7, 1954 Sept. 2, 1954	11.12 7.02	7,280 2,060
1935	Sept. 1, 1935	8.37	a2,450	1955	Oct. 8, 1954	7.63 9.05	2,640 4,180
1936	Feb. 17, 1936 July 25, 1936 Sept.11, 1936	8.98 6.95 8.30	3,700 2,050 3,080		July 22, 1955 July 23, 1955 July 25, 1955 Aug. 5, 1955 Aug. 6, 1955	11.3 7.72 7.05 9.88	8,450 2,690 2,080 •5,550
1937	Feb. 8, 1937 Feb. 16, 1937 Mar. 18, 1937 Sept.22, 1937	12.7 11.46 7.20 7.81	12,400 8,600 2,190 2,740		Aug. 13, 1955 Aug. 19, 1955 Aug. 23, 1955 Aug. 28, 1955	7.16 8.31 7.27 9.74	2,110 3,340 2,280 5,290
1938	Mar. 4, 1938 June 29, 1938	9.80 8.70	4,540 3,480	1956	Oct. 4, 1955	9.95	5,820
1939	Apr. 6, 1939	5.81	1,230	1957	July 17, 1957 July 26, 1957	7.4 9.9	2,130 5,230
1940	Oct. 8, 1939 Feb. 2, 1940 July 26, 1940 Aug. 14, 1940 Sept. 1, 1940 Sept. 6, 1940	8.66 8.23 7.24 9.23 7.32 11.6	3,480 2,920 2,260 3,850 2,250 8,700		Aug. 5, 1957 Aug. 7, 1957 Aug. 17, 1957 Aug. 17, 1957 Aug. 19, 1957 Aug. 20, 1957 Aug. 21, 1957	8.75 8.0 7.55 8.6 8.85 7.65 7.55 9.0	3,540 2,700 2,260 3,360 3,660 2,360 2,260 3,860
1941	Dec. 13, 1940 Dec. 25, 1940 Dec. 31, 1940 Jan. 28, 1941 Feb. 8, 1941 Mar. 15, 1941 Apr. 27, 1941 Aug. 17, 1941 Sept. 29, 1941	7.28 10.70 11.55 9.75 8.25 11.17 8.49 8.40 8.48 11.16	2,250 6,070 8,700 4,670 2,970 7,600 3,210 3,130 3,210 7,300	1958	Aug. 24, 1957 Aug. 25, 1957 Aug. 26, 1957 Mar. 7, 1958 Mar. 18, 1958 Mar. 23, 1958 Apr. 17, 1958 July 30, 1958 Aug. 21, 1958 Sept. 12, 1958 Sept. 7, 1958	8.5 9.0 6.48 7.9 9.65 8.75 6.9 7.8 10.15 8.15	3,240 3,860 2,020 3,150 6,010 4,750 2,230 3,280 7,000 3,770
1942	Dec. 11, 1941	11.37	7,930	1959	Oct. 6, 1958	7.10	-
1943	Mar. 5, 1943	6.40	1,580	1303	Aug. 20, 1959	6.7 5.65	2,430 4,590 3,080
1944	Sept.26, 1944	9.15	3,800		Aug. 25, 1959 Aug. 26, 1959 Aug. 28, 1959	5.25 10.7	2,600 11,600
1945	Aug. 17, 1945 Aug. 22, 1945	7.73 8.07	2,500 2,820	1960	Oct. 31, 1959 Dec. 26, 1959	6.75 8. 4 5	3,560 5,590
1946	Sept. 5, 1946	6.15	1,380		Jan. 12, 1960 Mar. 9, 1960	10.7	11,800 2,150
1947	Aug. 23, 1947	10.56	5,860	1961	Sept.10, 1961	6.30	7,100
1948	June 1, 1948	10.3	5,850		Sept.12, 1961	4.68	3,180
1949	Dec. 28, 1948 Jan. 13, 1949 Jan. 24, 1949 Mar. 8, 1949 July 1, 1949 Aug. 8, 1949	7.8 15.4 9.6 9.7 10.5 10.1	2,890 24,100 3,940 4,520 6,010 4,680	1962	Dec. 16, 1961 Jan. 25, 1962 Feb. 13, 1962 July 30, 1962 Sept.26, 1962	4.54 4.01 3.84 3.53 8.20	4,140 3,380 2,960 2,400 14,300

a Annual peak only.

4455. Willow Creek near Point of Pines, near Morenci, Ariz.

<u>Location</u>.--Lat 33°22'45", long 109°39'00", in $NW_{\overline{u}}^{\overline{l}}$ sec.2, T.1 S., R.26 E. (unsurveyed), in San Carlos Indian Reservation, at head of box canyon, 4 miles east of Point of Pines, 10 miles west of Double Circle Ranch, and 23 miles northwest of Morenci.

Drainage area .-- 102 sq mi.

Gage. -- Recording. Altitude of gage is 5,804 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 60 cfs and extended above on basis of slope-area measurements at gage heights 7.96, 8.72, and 10.1 ft.

Remarks.--Peak discharges have been reduced to natural flow by adjustment for flow (not greater than 20 ofs) pumped from Black River; consequently these figures may differ from those previously published. Base for partial-duration series, 60 ofs.

Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1945	Mar. 26, 1945 July 28, 1945 Aug. 3, 1945	3.95 3.99 3.45	168 157 84	1957	July 17, 1957 July 31, 1957 Aug. 14, 1957 Aug. 16, 1957	4.05 3.65 5.10 4.2	166 113 381 199	
1946	July 10, 1946 Sept.11, 1946	7.96 3.67	1,370 110		Aug. 17, 1957 Aug. 22, 1957 Aug. 24, 1957	5.1 3.51 5.38	382 99 450	
1947	July 22, 1947 Aug. 12, 1947 Aug. 22, 1947	6.25 6.90 4.92	687 917 333	1958	Aug. 26, 1957 Feb. 26, 1958	3.73 6.18	127	
	Aug. 28, 1947 Aug. 30, 1947 Sept. 8, 1947	4.27 4.56 3.36	204 276 72		Mar. 6, 1958 Mar. 8, 1958 Mar. 10, 1958 Mar. 13, 1958	3.14 4.00 3.17 3.66	66 176 69 127	
1948	July 24, 1948 Aug. 20, 1948	3,38 5,25	75 41 0	1	Mar. 14, 1958 Mar. 16, 1958 Mar. 17, 1958	3.44 4.84 5.4	100 334 464	
1949	Jan. 11, 1949 Jan. 13, 1949 Jan. 23, 1949 Feb. 24, 1949	3.67 6.37 4.51 3.12	128 7 44 266 64		Mar. 22, 1958 Apr. 11, 1958 Sept.10, 1958	6.32 3.10 3.85	727 53 146	
1950	July 24, 1949 July 1, 1950	4.53 2.86	270 23	1959	July 18, 1959 Aug. 1, 1959 Aug. 2, 1959	3.76 9.0 5.6	135 1,920 511	
1951	Aug. 1, 1951 Aug. 5, 1951 Aug. 27, 1951	3.72 6.75 3.46	119 861 91		Aug. 4, 1959 Aug. 6, 1959 Aug. 7, 1959 Aug. 15, 1959	3.9 4.85 3.57 3.25	156 331 110 73	
1952	Oct. 25, 1951 Dec. 31, 1951 Jan. 13, 1952 Jan. 18, 1952 Mar. 6, 1952 Mar. 18, 1952	5.18 6.86 10.1 8.72 3.46 3.64	395 919 2,590 1,770 102 124		Aug. 17, 1959 Aug. 18, 1959 Aug. 19, 1959 Aug. 21, 1959 Aug. 25, 1959 Aug. 25, 1959 Aug. 26, 1959 Aug. 27, 1959	3.35 3.13 7.0 4.5 4.95 4.65 3.77 3.32	84 65 975 264 358 294 142 85	
1953	July 8, 1953	5.04	365	1960				
1954	Mar. 23, 1954 July 9, 1954 July 23, 1954 Aug. 3, 1954 Aug. 5, 1954 Aug. 7, 1954 Aug. 10, 1954	8.00 3.22 3.44 4.97 3.20 4.55 3.41	1,410 64 86 346 56 260 83	1960	Nov. 2, 1959 Dec. 26, 1959 Jan. 11, 1960 Jan. 26, 1960 Feb. 2, 1960 Feb. 9, 1960 Mar. 7, 1960 Aug. 11, 1960	3.73 6.15 7.4 3.45 3.70 3.15 3.42 3.89	136 675 1,140 101 132 67 95	
1955	July 29, 1955 Aug. 5, 1955 Aug. 6, 1955	3.32 4.56 4.02	85 263 166	1961	Aug. 17, 1961 Sept. 8, 1961	4.40 3.53	245 111	
1956	Aug. 10, 1955 Oct. 2, 1955 Aug. 17, 1956	7.44 5.32 3.17	1,130 436 53	1962	Jan. 9, 1962 Jan. 24, 1962 Feb. 10, 1962	3.14 4.12 3.32	66 195 85	

4460. Willow Creek near Double Circle Ranch, near Morenci, Ariz.

<u>Location</u>.--Lat 33°21'15", long 109°31'30", in $NE_{\overline{k}}^{1}$ sec.13, T.1 S., R.27 E. (unsurveyed), in San Carlos Indian Reservation, $2\frac{1}{k}$ miles northwest of Double Circle Ranch, $2\frac{1}{k}$ miles upstream from mouth, and 19 miles northwest of Morenci.

Drainage area. -- 149 sq mi.

Gage .-- Recording. Altitude of gage is 4,969 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs and extended above by logarithmic plotting and slope-area measurements. Relation subject to large shifts.

Remarks.--Peak discharges have been reduced to natural flow by adjustment for flow (not greater than 20 ofs) pumped from Black River; consequently these figures may differ from those previously published. Base for partial-duration series, 60 ofs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Sept.11, 1944 Sept.24, 1944 Sept.26, 1944	4.4 4.10 5.32	209 145 594	1955	Aug. 10, 1955 Aug. 20, 1955	6.96 5.38	1,390 73
	Sept.28, 1944	5.90	1,100	1956	Oct. 3, 1955	5.63	108
1945	Mar. 27, 1945 July 29, 1945	4.20 3.92	134 70	1957	July 16, 1957 July 18, 1957 July 31, 1957	5.22 5.32 5.14	65 110 50
1946	July 10, 1946 Sept.12, 1946	6.03 3.92	1,220 69		Aug. 14, 1957 Aug. 16, 1957 Aug. 17, 1957	5.79 5.42 5.90	355 166 410
1947	July 22, 1947 Aug. 8, 1947 Aug. 12, 1947	5.37 5.09 4.91	612 438 348		Aug. 22, 1957 Aug. 24, 1957 Aug. 26, 1957	5.44 6.2 5.48	178 621 200
	Aug. 22, 1947 Aug. 30, 1947	4.92 4.42	354 171	1958	Feb. 26, 1958	6.44 5.32	994
1948	Aug. 20, 1948	4.33	147		Mar. 6, 1958 Mar. 9, 1958 Mar. 14, 1958	5.58 5.4	124 229 151
1949	Jan. 13, 1949 Jan. 23, 1949 July 10, 1949 July 13, 1949	6.49 4.94 4.87 4.87	2,010 315 178 176		Mar. 17, 1958 Mar. 22, 1958 Apr. 11, 1958 Aug. 10, 1958	6.28 6.84 5.08 5.38	792 1,640 53 134
	July 19, 1949 July 24, 1949	6.60 5.95	563 425		Aug. 16, 1958 Sept.10, 1958 Sept.13, 1958	5.86 6.14 5.39	387 631 140
1950	Dec. 11, 1949	3.56	24	1959	Aug. 1, 1959	8.2	3,520
1951	Aug. 1, 1951 Aug. 5, 1951 Aug. 28, 1951	5.72 7.1 4.95	359 1,350 302		Aug. 2, 1959 Aug. 4, 1959 Aug. 6, 1959 Aug. 7, 1959	5.90 5.42 5.49 5.21	403 170 182 92
1952	Oct. 26, 1951 Dec. 31, 1951 Jan. 13, 1952	4.87 6.33 7.62	278 900 4, 230		Aug. 17, 1959 Aug. 19, 1959 Aug. 21, 1959	5.98 6.75 6.80	457 1,140 1,190
	Jan. 18, 1952 Mar. 7, 1952 Mar. 19, 1952 Mar. 31, 1952	7.61 4.34 4.74 4.12	2,620 95 159 61		Aug. 25, 1959 Aug. 25, 1959 Aug. 26, 1959 Aug. 27, 1959	5.64 6.18 6.1 5.30	258 609 547 117
	Aug. 15, 1952 Aug. 23, 1952	6.12 5.72	674 442	1960	Nov. 2, 1959 Dec. 26, 1959	5.40 6.70	171 1,080
1953	July 8, 1953	4.95	191		Jan. 11, 1960 Jan. 26, 1960	7.65 5.04	2,380 117
1954	Mar. 23, 1954 Aug. 3, 1954 Aug. 5, 1954 Aug. 8, 1954	7.00 5.41 4.92 5.35	1,610 190 74 174		Feb. 3, 1960 Feb. 10, 1960 Mar. 7, 1960 Aug. 11, 1960	5.21 4.82 4.97 5.07	159 77 106 103
1955	Aug. 9, 1954 Aug. 4, 1955	4.92 5.33	76 137	1961	July 30, 1961 Sept.11, 1961	6.20 6.58	623 950
	Aug. 5, 1955 Aug. 6, 1955 Aug. 9, 1955	5.34 7.72 5.37	2,830 72	1962	Jan. 25, 1962	5.77	378

4465. Eagle Creek near Double Circle Ranch, near Morenci, Ariz.

<u>Location</u>.--Lat 33°18'00", long 109°29'30", in SE $\frac{1}{4}$ sec.32, T.1 S., R.28 E. (unsurveyed), $2\frac{1}{4}$ miles downstream from Willow Creek, $3\frac{1}{4}$ miles downstream from Double Circle Ranch, and 17 miles northwest of Morenci.

Drainage area. -- 377 sq mi.

Gage.--Recording. At datum 2.01 ft higher prior to Jan. 13, 1952. Altitude of gage 1s 4,722 ft (from barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,000 cfs and extended above on basis of slope-area measurements at gage heights 6.81 and 8.51 ft, present datum. Relation subject to considerable shifting.

Remarks.--Peak discharges have been reduced to natural flow by adjustment for flow (not greater than 20 ofs) pumped from Black River; consequently these figures may differ from those previously published. Base for partial-duration series, 250 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	Sept.11, 1944 Sept.25, 1944 Sept.26, 1944 Sept.28, 1944	4.80 4.35 3.07 3.70	a2,400 1,880 741 1,240	1954	Aug. 24, 1954 Aug. 29, 1954 Sept. 4, 1954	7.15 4.42 4.27	4,380 770 623
1945	Aug. 3, 1945 Aug. 6, 1945 Aug. 31, 1945	3.10 3.25 3.15	746 782 717	1955	July 11, 1955 July 23, 1955 July 24, 1955 July 26, 1955	3.98 5.21 5.50 4.90	373 1,550 1,720 920
1946	July 10, 1946 July 31, 1946	3.78 2.53	1,140 315		Aug. 3, 1955 Aug. 4, 1955 Aug. 6, 1955	4.95 5.06 5.76	1,010 1,140 1,980
1947	July 22, 1947 Aug. 8, 1947 Aug. 13, 1947 Aug. 15, 1947 Aug. 22, 1947	3.24 3.25 2.77 3.51 3.82	616 664 384 1,070 985		Aug. 7, 1955 Aug. 10, 1955 Aug. 18, 1955 Aug. 21, 1955 Aug. 28, 1955	5.96 5.90 5.19 6.10 4.77	2,250 2,180 1,460 2,670 1,060
1948	Aug. 25, 1947 Aug. 21, 1948	4.76 2.26	2,060	1956	July 29, 1956 July 31, 1956 Aug. 15, 1956	4.24 5.26 4.53	368 1,400 580
1949	Jan. 13, 1949 Jan. 23, 1949 July 19, 1949 July 24, 1949 Aug. 8, 1949	4.80 2.77 3.78 2.82 3.24	2,400 478 983 488 735	1957	July 16, 1957 July 18, 1957 July 26, 1957 Aug. 1, 1957 Aug. 2, 1957	4.86 4.17 4.58 5.64 4.09	576 841 452 1,600
1950	July 28, 1950 July 30, 1950 Sept.17, 1950	3.68 2.81 3.19	863 339 328	1958	Aug. 17, 1957 Aug. 24, 1957 Oct. 12, 1957	4.58 4.68 4.08	597 667 303
1951	July 29, 1951 Aug. 1, 1951 Aug. 5, 1951 Aug. 25, 1951 Aug. 28, 1951	3.60 3.98 3.94 3.06 4.15	587 979 1,070 440 1,460		Feb. 26, 1958 Mar. 8, 1958 Mar. 17, 1958 Mar. 22, 1958 July 28, 1958 Aug. 10, 1958	4.64 4.03 5.04 5.8 4.0 5.33	648 299 956 1,820 276 1,230 263
1952	Oct. 26, 1951 Dec. 31, 1951 Jan. 13, 1952 Jan. 19, 1952 Aug. 15, 1952	2.84 3.97 8.51 6.78 4.42	457 1,310 7,000 3,780 468		Aug. 16, 1958 Aug. 22, 1958 Sept. 9, 1958 Sept. 10, 1958 Sept. 13, 1958	3.94 3.89 3.93 8.7 4.22	241 261 7,260 388
1953	Aug. 19, 1952 July 25, 1953 July 28, 1953 Aug. 1, 1953	4.25 4.30 4.50 4.68	386 304 387 446	1959	Oct. 6, 1958 July 16, 1959 July 27, 1959 Aug. 1, 1959 Aug. 4, 1959	3.91 6.2 4.5 5.75 4.98	259 2,370 616 3,200 1,390
1954	Mar. 23, 1954 July 1, 1954 July 21, 1954 July 23, 1954 Aug. 3, 1954 Aug. 5, 1954 Aug. 6, 1954 Aug. 7, 1954 Aug. 7, 1954	5.865 3.553 6.94 5.74 5.03	2,270 526 2,340 312 3,600 1,540 2,340 1,490	1960	Aug. 10, 1959 Aug. 15, 1959 Aug. 17, 1959 Aug. 18, 1959 Aug. 19, 1959 Aug. 21, 1959 Aug. 25, 1959 Aug. 26, 1959	5.48 4.40 5.20 3.98 4.73 4.51 4.13 5.21	2,420 652 1,780 351 1,030 765 444 1,800
	Aug. 8, 1954 Aug. 9, 1954 Aug. 17, 1954	3.93 4.45 3.80	364 800 269	1960	Dec. 26, 1959 Jan. 12, 1960	5.40 6.2	2,220 4,990

a Annual peak; peaks prior to Aug. 26, 1944, not known.

Peak stages and discharges of Eagle Creek near Double Circle Ranch, near Morenci, Ariz.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1961	June 24, 1961 July 21, 1961 July 30, 1961 Aug. 14, 1961 Aug. 14, 1961	4.12 4.37 4.53 4.10 4.31	348 438 579 288 431	1961 1962	Aug. 17, 1961 Sept. 9, 1961 Sept.11, 1961 Jan. 25, 1962	4.16 4.98 6.15	316 1,030 2,470

4470. Eagle Creek above pumping plant, near Morenci, Ariz.

<u>Location.</u>--Lat 33°04'00", long 109°26'45", in $SE_{\frac{1}{4}}^{\frac{1}{4}}NE_{\frac{1}{4}}^{\frac{1}{4}}$ sec.22, T.4 S., R.28 E., on right bank $2\frac{1}{2}$ miles upstream from Phelps Dodge Corp. pumping plant, 5 miles west of Morenci, and 13 miles upstream from mouth.

Drainage area. -- 613 sq mi.

Gage.--Recording 80 ft upstream from Parshall flume and weir. At site 75 ft downstream from flume at different datum prior to Nov. 15, 1952. Datum of gage 1s 3,695 ft, unadjusted.

 $\frac{Stage-discharge\ relation}{cfs\ and\ by\ slope-area}. --Defined\ by\ current-meter\ measurements\ below\ 3,900$

Remarks.--Diversions above station and pumpage into Eagle Creek from Black River and wells along Eagle Creek have negligible effect on peak flows. Base for partial-duration series, 300 cfs.

	Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1932	Feb. 10, 1932	-	13,000	1954	Sept.25, 1954	4.23	334			
1945	Aug. 11, 1945	4.18	433	1955	July 20, 1955 July 23, 1955	4.67 4.12	510 301			
1946	Aug. 7, 1946	3.99	384		July 25, 1955 July 27, 1955	6.03 4.16	2,750 313			
1947	Aug. 8, 1947 Aug. 23, 1947	4.95 4.30	710 495		Aug. 3, 1955 Aug. 4, 1955 Aug. 6, 1955	4.39 5.79 6.25	386 2,200 3,260			
1948	Aug. 5, 1948	3.44	300		Aug. 8, 1955 Aug. 9, 1955	5.85 4.22	2,340 331			
1949	Jan. 13, 1949 Jan. 24, 1949 July 19, 1949 July 24, 1949 Aug. 8, 1949	6.80 - 4.50 4.95 4.90	2,500 400 555 710 690		Aug. 11, 1955 Aug. 12, 1955 Aug. 18, 1955 Aug. 21, 1955	5.10 4.70 4.75 5.70	890 525 558 2,000			
1950	July 19, 1950 July 25, 1950	-	310 310	1956	July 30, 1956 Aug. 20, 1956	4.55 4.21	452 328			
	July 28, 1950	4.20	470	1957	July 17, 1957 July 18, 1957	4.98 4.65	750 500			
1951	Aug. 2, 1951 Aug. 6, 1951 Aug. 28, 1951	3.95 3.34 5.55	745 585 1,260		July 19, 1957 July 26, 1957 Aug. 3, 1957	4.55 6.65 5.58 5.77	452 4,210 1,740 2,150			
1952	Dec. 31, 1951 Jan. 14, 1952 Jan. 18, 1952 Aug. 15, 1952	5.44 10.6 8.2 3.90	1,220 5,340 5,080 1,730		Aug. 5, 1957 Aug. 15, 1957 Aug. 17, 1957 Aug. 22, 1957 Aug. 24, 1957	4.80 6.35 5.38 4.80	590 3,490 1,330 590			
1953	July 25, 1953 Aug. 1, 1953	6.7 4.36	2,780 383	1958	Feb. 27, 1958 Mar. 9, 1958 Mar. 14, 1958	4.67 4.66 4.22	652 615 367			
1954	Mar. 24, 1954 July 21, 1954 July 22, 1954 July 24, 1954 July 31, 1954 Aug. 1, 1954	6.63 6.16 6.95 5.08 5.05 5.15	4,160 3,050 4,930 866 830 960		Mar. 18, 1958 Mar. 23, 1958 Aug. 11, 1958 Sept.10, 1958 Sept.13, 1958 Sept.27, 1958	6.12 6.65 5.15 8.1 6.15 4.75	2,840 3,760 1,170 6,150 2,910 718			
	Aug. 3, 1954 Aug. 5, 1954 Aug. 6, 1954 Aug. 7, 1954 Aug. 9, 1954 Aug. 25, 1954 Sept.24, 1954	6.0 6.08 5.91 5.95 6.73 5.35 4.65	2,680 2,860 2,470 2,560 4,400 1,280 500	1959	Oct. 6, 1958 July 5, 1959 July 17, 1959 July 19, 1959 July 19, 1959 Aug. 2, 1959	5.15 4.0 5.5 6.4 5.7 5.95	1,170 329 1,720 3,340 2,090 2,550			

Peak stages and discharges of Eagle Creek above pumping plant, near Morenci, Ariz .-- Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1959	Aug. 4, 1959 Aug. 11, 1959	5.2 5.8	1,240 2,280	1960	Jan. 12, 1960	7.6	5,350
	Aug. 15, 1959 Aug. 17, 1959 Aug. 19, 1959 Aug. 22, 1959 Aug. 24, 1959	4.2 7.25 5.65 4.4 4.9	395 4,780 2,000 480 860	1961	July 28, 1961 Sept. 9, 1961 Sept.12, 1961 Sept.13, 1961	3.95 4.67 5.18 4.33	316 652 1,210 448
	Aug. 25, 1959 Aug. 25, 1959 Aug. 26, 1959 Aug. 27, 1959	5.75 5.9 4.95 4.1	2,180 2,460 915 360	1962	Dec. 16, 1961 Jan. 26, 1962 July 18, 1962 July 20, 1962 Sept. 4, 1962	5.13 4.78 5.57 - 4.78	1,140 743 1,850 1,300 743
1960	Nov. 1, 1959 Dec. 26, 1959	3.90 6.75	302 3,940		Sept. 8, 1962	4.15	378

4485. Gila River at head of Safford Valley, near Solomon, Ariz.

(Published as "near Solomonsville" 1914 to September 1932,
1941-49, and as "below Bonita Creek near Solomonsville"
October 1932 to September 1940)

<u>Location</u>.--Lat 32°52'10", long 109°30'40", in $SE_{u}^{\frac{1}{2}}NE_{u}^{\frac{1}{2}}$ sec.31, ".6 S., R.28 E., 0.6 mile downstream from intake of Brown Canal, 8 miles northeast of Solomon, and 13 miles downstream from San Francisco River.

Drainage area. --7,896 sq mi; 7,856 sq mi at site in use October 1932 to December 1940.

Gage.--Recording. At datum 1.89 ft higher Apr. 31, 1914, to Sept. 13, 1917, and at datum 0.89 ft higher Sept. 13, 1917, to Sept. 30, 1932. At site 3 miles upstream and three-eighths of a mile below Bonita Creek at different datum Oct. 1, 1932, to Dec. 31, 1940. At present site and datum thereafter. Datum of gage is 3,064.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1959.

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs and extended above on basis of slope-area measurements. Relation subject to considerable shifting.

Bankfull stage .-- 13 ft.

 $\frac{\text{Remarks.--Peak}}{\text{Base}}$ for partial-duration series, 4,000 cfs.

Water year	Date .	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Aug. 21, 1914	4.15	a9,000	1921	July 26, 1921 July 31, 1921	4.6	5,820 b9,000
1915	Oct. 4, 1914 Nov. 12, 1914 Dec. 20, 1914	6.0 3.7 8.75	24,000 8,000 50,000		Aug. 4, 1921 Aug. 19, 1921 Aug. 21, 1921	6.1 7.55	69,500 10,500 15,700
	Jan. 30, 1915 Feb. 12, 1915 Feb. 21, 1915	8.6 2.86 4.1	48,000 4,060 10,500	1922	Aug. 15, 1922	3.6	3,780
	Mar. 28, 1915 Apr. 7, 1915 July 26, 1915	3.9 3.76 5.5	9,000 7,600 20,000	1923	July 22, 1923 July 26, 1923 July 31, 1923 Aug. 4, 1923	5.22 4.32 3.95 4.08	7,050 4,700 4,080 4,360
1916	Jan. 19, 1916 Jan. 29, 1916 Feb. 13, 1916 Mar. 1, 1916 Mar. 25, 1916	14.0 6.0 2.40 2.5 2.46	100,000 28,000 4,910 4,900 4,400		Aug. 9, 1923 Aug. 12, 1923 Aug. 15, 1923 Aug. 20, 1923 Aug. 26, 1923	6.00 6.8 5.35 4.27 5.0 4.46	9,720 12,600 7,630 5,280 6,210
1917	Oct. 14, 1916	10.7	a67,900		Sept. 6, 1923		4,930
1918	July 1, 1918	3.1	2,700	1924	Nov. 11, 1923 Dec. 28, 1923	4.22 6.5	4,260 10,600
1919	July 14, 1919 Aug. 3, 1919	5.75 6.60	10,600 15,000	1925	June 24, 1925 July 31, 1925 Sept. 3, 1925	4.4 5.50 8.1	5,140 7,630 15,900
1920	Dec. 5, 1919 Feb. 10, 1920 Feb. 23, 1920	5.2 5.0 4.6	7,620 7,020 5,820	1926	Mar. 30, 1926 Apr. 7, 1926	4.07 4.58	4,300 5,660

a Annual peaks only. b Estimated.

Peak stages and discharges of Gila River at head of Safford Valley, near Solomon, Ariz. --Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 17, 1927 July 6, 1927	4.25 4.15	4,630 4,500	1944	Sept.25, 1944	9.00	15,800
	Sept.13, 1927	6.08	9,320	1945	Aug. 11, 1945	5.7	4,820
1928	Aug. 1, 1928	3.64	3,230	1946	Oct. 9, 1945	5.83	5,100
1929	July 27, 1929 July 30, 1929 Aug. 8, 1929	5.04 7.15 4.90	6,350 12,700 5,940	1947	Aug. 23, 1947 Aug. 30, 1947	6.86 7.30	6,100 9,250
	Aug. 10, 1929 Aug. 14, 1929	5.53 5.42	7,630 7,3 4 0	1948	June 1, 1948	5.56	2,540
1930	Sept.23, 1929 July 26, 1930	5.65 5.2	7,920 6,770	1949	Dec. 29, 1948 Jan. 14, 1949 Jan. 24, 1949	6.69 11.5 6.71	4,170 25,200 5,210
	Aug. 4, 1930 Aug. 8, 1930	4.75 6.30	5,540 10,000		Mar. 9, 1949	7.81	8,050
	Aug. 11, 1930	6.32	10,100	1950	July 30, 1950	5.30	1,240
1931	Feb. 15, 1931 Aug. 5, 1931	6.45 5.76	10,500 8,010	1951	Aug. 3, 1951	6.98	4,240
	Aug. 10, 1931 Sept. 4, 1931 Sept.19, 1931	5.05 4.47 4.36	6,420 4,910 5,220	1952	Jan. 14, 1952 Jan. 19, 1952	10.30 10.50	18,600 19,700
	Sept.29, 1931	4.45	5,120	1953	July 30, 1953	6.42	3,040
1932	Feb. 10, 1932 Mar. 1, 1932 July 30, 1932 Aug. 10, 1932	11.05 4.59 5.25 5.5	24,000 4,420 6,570 6,450	1954	Mar. 24, 1954 July 22, 1954 Aug. 3, 1954 Aug. 5, 1954	8.24 6.70 6.82 6.80	9,850 4,820 4,600 4,270
1933	Feb. 27, 1933	12.15 13.1	4,780 6,200	1	Aug. 8, 1954 Aug. 11, 1954	7.55 6.60	7,000 4,200
	Aug. 31, 1933 Sept. 9, 1933 Sept.14, 1933	15.4 14.1	9,600 6,670	1955	July 12, 1955 July 20, 1955 July 24, 1955	7.29 6.97 8.95	5,030 4,020 11,700
1934	Aug. 27, 1934	19.4	a23,000		July 25, 1955 Aug. 28, 1955	7.78 7.17	6,450 4,380
1935	Sept. 1, 1935	13.5	a5,550	1956	Oct. 3, 1955	7.70	6,380
1936	Feb. 17, 1936	13.94	8,000	1300	Oct. 4, 1955	9.20	13,300
1937	Feb. 8, 1937 Feb. 17, 1937 Mar. 18, 1937	19.1 15.6 13.19	23,700 12,700 6,430	1957	July 26, 1957 Aug. 5, 1957 Aug. 7, 1957	8.06 7.20 7.77	5,980 4,050 5,160
1938	Mar. 4, 1938	12.85	4,690	}	Aug. 18, 1957 Aug. 23, 1957	7.19 7.34	4,040 4,340
1939	Aug. 6, 1939	14.20	7,370		Aug. 26, 1957 Aug. 29, 1957	7.20 7.67	4,060 5,040
1940	Oct. 8, 1939 Feb. 3, 1940 Sept. 6, 1940	14.75 13.07 15.24	8,070 4,930 9,840	1958	Mar. 18, 1958 Mar. 23, 1958 Apr. 18, 1958	7.77 9.18 6.84	5,820 9,060 5,210
1941	Dec. 25, 1940 Dec. 31, 1940	16.35 18.4	12,000 17,600	1959	Sept.13, 1958 Aug. 18, 1959	8.23 6.8	7,310 4,130
	Jan. 28, 1941 Feb. 8, 1941 Mar. 15, 1941	7.05 5.82 8.64	8,140 5,490 12,300		Aug. 25, 1959 Aug. 27, 1959 Aug. 28, 1959	7.55 7.45 8.5	5,330 5,100 7,860
	Apr. 27, 1941 May 2, 1941 Sept.30, 1941	5.24 5.22 13.43	4,180 4,610 31,900	1960	Dec. 26, 1959 Jan. 12, 1960	7.9 10.8	6,460 16,700
1942	Dec. 12, 1941 Sept.13, 1942	6.33 5.55	7,730 5,520	1961	Sept.10, 1961	7.28	4,800
1943	Mar. 6, 1943 Aug. 10, 1943 Sept.27, 1943	5.38 5.72 5.87	4,260 6,100 6,680	1962	Dec. 16, 1961 Jan. 26, 1962 Feb. 14, 1962 Sept. 26, 1962	7.34 6.91 6.92 10.68	4,930 4,260 4,450 16,100

a Annual peaks only.

4519. Agriculatural Research Service Safford watershed W-I, Arizona

<u>Location</u>.--Lat 32°50'27", long 109°31'17", in NW $\frac{1}{4}$ sec.7, T.7 S., R.28 E., ll miles east of Safford, Graham County.

Drainage area .-- 0.81 sq mi.

Gage . -- Recording, with 6-hour chart.

Stage-discharge relation.--30-inch broadcrested, triangular concrete weir with 3:1 and 2:1 side slopes.

 $\frac{Remarks. \text{--Only annual peaks are shown.}}{Research \ Service, \ U.S. \ Department \ of \ Agriculture.}$

		1	Peak stages a	nd disch	arges		
Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)
1939	Oct. 7, 1939	_	126	1951	Aug. 3, 1951	-	16
1940	June 29, 1940	-	126	1952	July 6, 1952	-	37
			ĺ	1953	July 27, 1953	-	246
1941	Apr. 26, 1941) -	47	1954	Aug. 22, 1954	-	194
1942	Sept.11, 1942	-	173	1955	July 22, 1955	_	26
1943	Aug. 23, 1943	i -	377	1			
1944	Sept. 5, 1944	i -	434	1956	July 28, 1956	-	16
1945	Aug. 11, 1945	-	183	1957	July 26, 1957	-	173
				1958	July 5, 1958	-	21
1946	Aug. 30, 1946	-	42	1959	Aug. 3, 1959	-	126
1947	Aug. 20, 1947	-	47	1960	July 24, 1960	-	37
1948	Aug. 6, 1948	-	10	1			
1949	Sept.13, 1949	-	26	1961	Aug. 8, 1961	-	330
1950	July 7, 1950		94	1962	Sept.26, 1962	-	169

4545. Cave Creek near Paradise, Ariz.

<u>Location</u>.--Lat 31°54', long 109°10', in $SW_{\overline{h}}^{1}SE_{\overline{h}}^{1}$ sec.34, T.17 S., R.31 E., at Portal ranger station $4_{\overline{h}}^{1}$ miles southeast of Paradise.

Drainage area. -- 39 sq mi, approximately.

Gage .-- Nonrecording. Altitude of gage is 4,950 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 350 cfs and extended above.

Remarks. -- Peak discharges not affected by small diversions. Records furnished by University of Arizona, Agricultural Engineering Department. Only annual peaks are shown.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	Nov. 21, 1919	5	3,000	1923 1924	Aug. 31, 1923 Dec. 27, 1923	4.00 2.70	1,780 395
1921 1922	Aug. 7, 1921 Aug. 16, 1922	5.30 1.80	3,360 110	1925	July 31, 1925	1.95	a. 60

a Maximum daily.

4560. San Simon River near San Simon, Ariz. (Previously published as San Simon Creek near Sar Simon)

Location.--Lat 32°13'30", long 109°10'30", in SM_{π}^1 sec.10, T.14 S., R.31 E., at bridge on San Simon-Paradise highway, $4\frac{1}{2}$ miles southeast of San Simon.

<u>Drainage area</u>.--814 sq mi at site in use 1931-41; 893 sq mi at site in use 1919-25.

<u>Gage.--Nonrecording</u> at site $3\frac{1}{2}$ miles downstream at altitude 3,580 ft (frcm topographic map) Aug. 1, 1919, to Sept. 30, 1925. Recording since June 1931. Altitude of gage is 3,630 ft (from topographic map).

Stage-discharge relation.--1919-25: Defined by current-meter measurements.

1931-41: Defined by current-meter measurements below 2,300 cfs and extended above on basis of slope-area measurement at gage height 10.9 ft.

Remarks. -- Peak discharges unaffected by small diversions for irrigation. Records after 1931 are not closely comparable with earlier records because of probable large inflow during summer floods between the two stations. Records for 1919-25 furnished by University of Arizona, Agricultural Engineering Department. Base for partial-duration series, 650 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	July 21, 1923	14.0	a5,350	1937	Aug. 9, 1937	5.80	548
1931	Aug. 1, 1931 Aug. 4, 1931 Aug. 10, 1931	7.50 8.78 11.15	1,400 2,400 4,500	1938	June 29, 1938 Aug. 4, 1938	8.50 6.15	2,280 699
1932	July 25, 1932	7.3	1,250	1939	July 24, 1939 July 27, 1939 July 31, 1939	6.70 6.28 8.58	1,000 773 2,360
1933	Aug. 4, 1933	7.71	1,550		Aug. 5, 1939 Aug. 11, 1939	7.90 6.61	1,840
1934	Oct. 9, 1933 August 1934	6.67 11.2	822 4,550		Aug. 13, 1939	9.25	2,840
1935	Aug. 5, 1935 Aug. 7, 1935 Aug. 12, 1935 Aug. 25, 1935 Aug. 28, 1935 Sept.23, 1935	8.5 7.09 6.87 7.7 11.7 7.17	2,280 1,250 1,090 1,680 5,020 1,280	1940	June 29, 1940 July 24, 1940 Aug. 3, 1940 Aug. 7, 1940 Aug. 14, 1940 Sept.21, 1940	10.9 8.10 6.54 6.89 6.23 8.47	4,280 2,170 1,060 1,300 868 2,480
1936	July 25, 1936 Aug. 18, 1936 Aug. 28, 1936 Sept.20, 1936 Sept.25, 1936	6.50 10.85 6.45 6.82 7.00	880 4,190 852 1,060 1,180	1941	July 15, 1941 July 18, 1941 Aug. 15, 1941 Aug. 21, 1941 Sept.29, 1941	6.13 5.94 7.7 6.40 6.57	808 689 1,870 961 1,060

a Annual peak only.

4566.8. Agricultural Research Service Safford watershed W-V, Arizona

<u>Location</u>.--Lat 32°25'20", long 109°39'27", in NE $\frac{1}{4}$ sec.2, T.12 S., R.26 E., 15 miles southeast of Safford, Graham County.

Drainage area. -- 1.13 sq mi.

Gage .-- Recording, with 6-hour chart.

Stage-discharge relation. -- 30-inch broadcrested, triangular concrete weir with 5:1 side slopes.

Remarks.--Only annual peaks are shown. Records furnished by Agricultural Research Service, U.S. Department of Agriculture.

Peak stages and discharges of Agricultural Research Service Safford watershed W-V, Ariz.

Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)
1939	Aug. 6, 1939	-	117	1951	Oct. 30, 1951	_	15
1940	Aug. 8, 1940	-	36	1952	Aug. 11, 1952	-	430
		l		1953	July 31, 1953	-	292
1941	Sept. 9, 1941	-	87	1954	Sept. 5, 1954	-	80
1942	July 30, 1942	-	80	1955	July 22, 1955	-	671
1943	Aug. 23, 1943	-	233				
1944	Aug. 16, 1944	-	255	1956	Aug. 15, 1956	-	109
1945	Sept. 9, 1945	-	211	1957	Aug. 30, 1957	-	262
				1958	July 30, 1958	-	7
1946	Aug. 18, 1946	-	44	1959	Aug. 1, 1959	-	22
1947	Aug. 30, 1947	-	44	1960	Aug. 20, 1960	-	299
1948	July 24, 1948	-	190				
1949	Aug. 8, 1949	-	44	1961	Aug. 15, 1961	-	211
1950	July 28, 1950	-	44	1962	July 24, 1962		2

4568.2. Agricultural Research Service Safford watershed W-IV, Arizona

Location.--Lat 32°37'30", long 109°36'00", in NE $\frac{1}{4}$ sec.29, T.7 S., R.27 E., 16 miles southeast of Safford, Graham County.

Drainage area. -- 1.19 sq mi.

Gage .-- Recording, with 6-hour chart.

Stage-discharge relation.--16-inch broadcrested, triangular weir with 5:1 side slopes.

 $\underline{\text{Remarks.}\text{--}\text{Only}}$ annual peaks shown. Records furnished by Agricultural Research Service, U.S. Department of Agriculture.

Peak stages and discharges

Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)
1939	Sept. 6, 1939	_	85	1951	Aug. 2, 1951		62
1940	Sept. 5, 1940	-	123	1952	Aug. 16, 1952	-	177
				1953	July 17, 1953	-	31
1941	Aug. 16, 1941	-	123	1954	July 22, 1954	-	62
1942	Sept.19, 1942	-	177	1955	July 28, 1955	-	77
1943	Aug. 18, 1943	-	185	ļ			
1944	Sept.24, 1944	_ :	185	1956	July 1, 1956	_	31
1945	July 31, 1945	-	116	1957	Aug. 22, 1957	-	39
				1958	Aug. 16, 1958	-	508
1946	Aug. 3, 1946	-	116	1959	Aug. 2, 1959	-	23
1947	June 16, 1947	-	100	1960	Aug. 5, 1960	-	8
1948	June 1, 1948	-	77		, , , , , , , , , , , ,		
1949	July 22, 1949	-	31	1961	Aug. 22, 1961	_	346
1950	June 22, 1950	-	23	1962	Sept.26, 1962	-	34

4570. San Simon River near Solomon, Ariz. (Published as "San Simon Creek near Solomonsville" prior to 1950 and as "San Simon Creek near Solomon" 1950-61)

<u>Location</u>.--Lat 32°48'06", long 109°38'19", in $NW_{\frac{1}{4}NE_{\frac{1}{4}}}^{1}$ sec.25, T.7 S., R.26 E., 1 mile southwest of Solomon and $2\frac{1}{2}$ miles upstream from mouth.

Drainage area. -- 2,192 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 2,960.15 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,000 cfs and extended above by slope-area measurement at gage height 19.0 ft.

Bankfull stage .-- 16 ft.

Remarks.--Peak discharge unaffected by small irrigation diversions prior to May 27, 1953. Some regulation of floodflow after this date by flood-control detention reservoir, having 1,400 sq mi of drainage area, located 35 miles upstream. Storage capacity is 3,370 acre-ft at emergency spillway level. Base for partial-duration series, 2,500 cfs.

Peak stages and discharges of San Simon River near Solomon, Ariz,

Peak stages and discharges of San Simon River near Solomon, Ariz.							
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Aug. 4, 1931 Aug. 9, 1931 Aug. 24, 1931	10.7 19.0 7.8	4,830 27,500 2,640	1946	Oct. 9, 1945 Aug. 30, 1946	8.09 9.91	3,180 4,820
	Aug. 30, 1931 Sept.18, 1931 Sept.28, 1931	15.4 11.35 9.13	9,680 5,840 4,080	1947	June 18, 1947 Aug. 8, 1947 Aug. 23, 1947	7.34 7.1 7.17	2,700 2,540 2,620
1932	Oct. 1, 1931 July 9, 1932 July 25, 1932	14.47 8.34 8.26	8,780 3,120 3,060	1948	Aug. 6, 1948 Aug. 21, 1948	10.95 7.70	5,880 2,880
	July 28, 1932 July 30, 1932 Aug. 8, 1932	8.81 14.5 12.6	3,52 0 8,800 7,000	1949	July 9, 1949 July 23, 1949 Aug. 8, 1949	13.3 8.05 15.55	6,310 2,860 8,100
1933	July 16, 1933	9.45	a4,000	1950	Sept.18, 1950	7.42	2,060
1934 1935	August 1934 Aug. 1, 1935 Aug. 6, 1935 Aug. 19, 1935 Aug. 29, 1935	15.7 16.35 7.56 8.8	all,500 12,000 2,700 3,790	1951	July 27, 1951 Aug. 2, 1951 Aug. 3, 1951	9.2 14.15 8.54	3,260 7,390 2,800
1936	July 25, 1936	8.5 12.05	3,500 7,450	1952	Aug. 15, 1952 Aug. 17, 1952 Sept.22, 1952	10.8 12.4 9.30	4,030 5,100 3,130
	Aug. 8, 1936 Aug. 19, 1936 Aug. 28, 1936 Sept.10, 1936	7.85 8.8 6.8 15.0	3,400 4,400 2,530 10,600	1953	July 7, 1953 July 31, 1953	10.70 8.42	3,970 2,630
1937	Sept.21, 1936 Aug. 21, 1937	6.88 7.20	2,610	1954	July 22, 1954 Aug. 3, 1954 Aug. 11, 1954	9.84 10.30 12.40	3,290 3,600 5,100
1938	July 12, 1938 Aug. 5, 1938	8.90 9.0	4,500 4,000		Aug. 21, 1954 Aug. 22, 1954 Aug. 24, 1954 Aug. 24, 1954	11.1 8.9 9.70	4,160 2,740 3,210
1939	Aug. 14, 1939	6.90	2,140		Aug. 24, 1954 Sept.12, 1954	11.12 14.20	4,170 6,980
1940	Aug. 4, 1940 Aug. 22, 1940 Sept. 5, 1940	7.52 7.28 11.0	2,610 2,450 6,080	1955	July 17, 1955 July 23, 1955 July 23, 1955 July 25, 1955	8.55 12.07 10.89 12.21	2,830 4,840 4,010 4,950
1941	Apr. 25, 1941 Aug. 17, 1941 Sept.28, 1941	7.75 17.55 9.59	2,860 13,000 4,370		July 28, 1955 July 30, 1955 Aug. 19, 1955	9.72 13.71 8.87	3,220 6,400 2,730
1942	Aug. 6, 1942 Aug. 8, 1942	7.45 7.40	2,780 2,660	1956	Oct. 4, 1955	6.5	1,520
-	Sept.11, 1942 Sept.20, 1942	10.05 7.51	5,000 2,750	1957	July 17, 1957 July 26, 1957 Aug. 5, 1957	10.10 8.70 9.55	3,200 2,500 2,880
1943	July 25, 1943 Aug. 2, 1943 Aug. 5, 1943	7.92 10.75 7.58 10.85	3,110 5,750 2,940	1958	Aug. 30, 1957 Aug. 16, 1958	18.33	8,950 4,250
	Aug. 10, 1943 Aug. 15, 1943 Aug. 24, 1943	11.43	5,850 6,430 4,960	1959	Sept.13, 1958 July 29, 1959 Aug. 23, 1959	9.2 12.0	3,740 2,930 4,610
1944	Aug. 16, 1944 Aug. 18, 1944 Sept. 5, 1944	8.54 10.36 7.30	3,740 5,400 2,590	1960	Sept. 9, 1960	9.75	3,260
1945	Sept. 25, 1944 July 31, 1945	10.88	5,900 4,010	1961	July 28, 1961 Aug. 22, 1961 Aug. 29, 1961	9.10 16.50 11.95	3,070 7,750 4,600
1010	Aug. 3, 1945 Aug. 10, 1945	9.6 12.35	4,640 7,350	1962	Sept.26, 1962	11.95	3,970

a Annual peak only.

4585. Gila River at Safford, Ariz.

<u>Location</u>.--Lat 32°50'50", long 109°42'55", in $SW_u^{\frac{1}{4}}SW_u^{\frac{1}{4}}$ sec.5, T.7 S., R.26 E., at highway bridge 1 mile north of Safford and $4\frac{1}{4}$ miles downstream from San Simon River.

Drainage area. -- 10,459 sq mi.

Gage.--Recording. At site 1,400 ft upstream at datum 6.91 ft higher June 1940 to June 1942. Datum of gage is 2,880.07 ft above mean sea level, datum of 1929.

Stage-discharge relation .-- Defined by current-meter measurements.

Remarks.--Peak discharge unaffected by irrigation diversions, but affected to some extent after May 27, 1953, by flood-control reservoir on San Simon River (capacity, 3,370 acre-ft at emergency spillway level). Base for partial-duration series, 4,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 6, 1940	5.06	28,600	1950	July 30, 1950	5.50	1,860
1941	Dec. 25, 1940 Dec. 31, 1940	5.44 6.9	9,920 15,200	1951	Aug. 3, 1951	8.75	6,390
	Jan. 28, 1941 Feb. 8, 1941 Mar. 16, 1941 Apr. 28, 1941	5.05 4.05 6.28 3.59	8,560 4,980 12,400 4,030	1952	Jan. 14, 1952 Jan. 19, 1952 Aug. 17, 1952	11.24 11.42 7.83	14,900 15,700 4,630
	May 2, 1941 Aug. 17, 1941	3.65 5.4	4,140 9,180	1953	July 7, 1953	6.56	2,670
	Sept.28, 1941 Sept.30, 1941	5.15 13.0	8,320 33,000	1957	July 26, 1957 Aug. 5, 1957 Aug. 7, 1957	9.7 8.2 8.2	8,180 4,860 4,860
1942	Dec. 12, 1941 Sept.14, 1942	5.00 7.45	7,800 6,620		Aug. 18, 1957 Aug. 23, 1957 Aug. 26, 1957	7.56 7.9 7.7	3,780 4,330 4,000
1943	Mar. 6, 1943 Aug. 2, 1943 Aug. 10, 1943	6.58 6.8 6.60	4,270 4,870 4,140		Aug. 30, 1957 Aug. 31, 1957	8.2 10.4	4,860 10,300
	Aug. 15, 1943 Aug. 24, 1943 Sept.27, 1943	6.65 7.35 7.15	4,260 5,380 5,780	1958	Mar. 18, 1958 Mar. 23, 1958 Apr. 18, 1958 Sept.13, 1958	8.07 9.83 7.80 9.9	4,630 8,210 4,440 9,660
1944	Aug. 18, 1944 Sept. 5, 1944 Sept.26, 1944	7.5 7.45 10.4	6,730 6,590 13,600	1959	Sept.28, 1958 Aug. 18, 1959	8.03 8.05	4,720 3,540
1945	Aug. 3, 1945	7.9	5,320		Aug. 23, 1959 Aug. 25, 1959 Aug. 27, 1959	8.3 9.5 9.15	3,950 6,520 5,640
1946	Oct. 9, 1945 Aug. 30, 1946	8.00 7.2	6,340 4,390	3000	Aug. 28, 1959	9.6	6,810
1947	Aug. 23, 1947 Aug. 31, 1947	7.18 7.3	4,350 4,600	1960	Dec. 26, 1959 Jan. 12, 1960	9.25 12.0	5,870 15,400
1948	Aug. 7, 1948	9.34	6,090	1961	July 28, 1961 Aug. 15, 1961 Aug. 22, 1961	8.40 9.65 9.75	3,840 6,740 6,990
1949	Dec. 30, 1948 Jan. 14, 1949	7.65 13.1	4,320 23,900		Aug. 29, 1961	9.12	5,780
	Jan. 24, 1949 Mar. 9, 1949 July 9, 1949	7.35 8.45 7.5	5,000 7,790 5,300	1962	Dec. 17, 1961 Jan. 26, 1962 Feb. 16, 1962	9.20 8.68 8.53	5,540 4,210 4,160
a Ani	Mar. 9, 1949	8.45	7,790		Jan. 26, 1962	8,68	4,3

4611. Agricultural Research Service Tombstone watershed W-V, Arizona

Location. --Lat 31°42'32", long 110°01'50", in $SW_u^1NE_u^1$ sec.5, T.20 S., R.23 E., about 2 miles east of Tombstone, Cochise County.

Drainage area .-- 8.61 sq mi.

Gage .-- Recording, with 8-hour chart.

Stage-discharge relation .-- Critical-depth flume.

 $\underline{\text{Remarks.}\text{--Only}}$ annual peaks shown. Records furnished by Agricultural Research Service, U.S. Department of Agriculture.

	Peak stages and discharges										
Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Pischarge (cfs)				
1954 1955	Oct. 4, 1954 July 25, 1955	-	5,290 2,200	1959 1960	July 26, 1959 Aug. 1, 1960	-	2,240 6.7				
1956 1957 1958	July 18, 1956 Aug. 17, 1957 Aug. 16, 1958		570 3,120 646	1961 1962	July 31, 1961 July 25, 1962	-	347 407				

4611.7. Agricultural Research Service Tombstone watershed W-III, Arizona

Location. --Lat 31°43'58", long 110°03'25", in $SW_{4}^{1}SW_{4}^{1}$ sec.36, T.19 S., R.22 E., about 1 mile north of Tombstone, Cochise County.

Drainage_area. -- 3.47 sq mi.

Gage .-- Recording, with 8-hour chart.

Stage-discharge relation .-- Critical-depth flume .

 $\frac{Remarks.\text{--Only annual peaks shown.}}{Service,\, \text{U.S.}} \ \text{Department of Agriculture.}$

Peak stages and discharges

Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)
1954 1955	Aug. 19, 1954 July 19, 1955	-	505 2,860	1959 1960	Aug. 17, 1959 Aug. 20, 1960	-	172 22
1956 1957 1958	July 29, 1956 Aug. 17, 1957 Aug. 16, 1958	- - -	58 157 1,240	1961 1962	Aug. 18, 1961 July 28, 1962	-	695 15 4

4611.8. Agricultural Research Service Tombstone watershed W-IV, Arizona

Location. --Lat 31°44'16", long 110°02'11", in $SE_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.36, T.19 S., R.22 E., about 2 miles northeast of Tombstone, Cochise County.

Drainage area. -- 0.88 sq mi.

Gage .-- Recording, with 8-hour chart.

Stage-discharge relation .-- Critical-depth flume.

Remarks.--Only annual peaks shown. Records furnished by Agricultural Research Service, U.S. Department of Agriculture.

Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)
1954	Aug. 19, 1954		527	1959	Aug. 17, 1959	_	31.0
1955	July 19, 1955	-	1,420	1960	_	-	0
1956	July 19, 1956	-	74.8	1961	Aug. 18, 1961	_	189
1957	Aug. 17, 1957	-	111	1962	July 18, 1962	-	16.1
1958	Aug. 16, 1958	-	178	11			

4622. Agricultural Research Service Safford watershed W-II, Arizona

<u>Location</u>.--Lat 32°50'08", long 109°59'37", in $SE_{\pi}^{\frac{1}{2}}$ sec.9, T.7 S., R.23 E., 14 miles west of Thatcher, Graham County.

Drainage area. -- 1.07 sq mi.

Gage . -- Recording, with 6-hour chart.

Stage-discharge relation.--16-inch broadcrested, triangular weir with 5:1 side slopes.

Remarks.--Only annual peaks are shown. Records furnished by Agricultural Research Service, U.S. Pepartment of Agriculture.

	Peak stages and discharges										
Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)				
1939	Aug. 2, 1939	-	949	1951	Aug. 15, 1951	_	96				
1940	July 26, 1940	-	695	1952	Aug. 17, 1952	-	364				
				1953	July 15, 1953	-	96				
1941	Sept.28, 1941	-	997	1954	July 22, 1954	-	447				
1942	Aug. 7, 1942	-	585	1955	Aug. 3, 1955	-	89				
1943	Aug. 9, 1943	i -	688								
1944	Oct. 13, 1944	-	206	1956	Aug. 20, 1956	-	282				
1945	Aug. 10, 1945	-	619	1957	Aug. 30, 1957	-	41				
				1958	-1	-	0				
1946	Aug. 26, 1946	-	605	1959	July 16, 1959	_	825				
1947	Oct. 12, 1947	-	337	1960		_	0				
1948	July 25, 1948	-	722								
1949	July 10, 1949	-	729	1961	Aug. 22, 1961	-	309				
1950		_	0	1962	Sept. 9, 1962	_	30				

4665, Gila River at Calva, Ariz.

<u>Location</u>.--Lat 33°11'10", long 110°13'10", in $SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.8, T.3 S., R.21 E. (unsurveyed), at railroad bridge, in San Carlos Indian Reservation, at head of San Carlos Reservoir, $1\frac{1}{2}$ miles northwest of Calva.

Drainage area. -- 11,470 sq mi.

Gage.--Recording. At datum 3.00 ft lower Oct. 1, 1954, to Aug. 29, 1958.
Datum of gage is 2,514.77 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements.

<u>Historical data</u>.--The greatest known flood, that of Jan. 20, 1916, was estimated as 100,000 cfs or greater on basis of records at Solomon and at Kelvin.

 $\frac{\text{Remarks.}\text{--Peak}}{\text{Base}}$ for partial-duration series, 3,000 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height year (cfs) year (cfs) (feet) (feet) Feb. 27, 1933 Sept. 9, 1933 Sept.14, 1933 5,250 6,560 4,050 1916 Jan. 20, 1916 aloo,000 1933 5.84 6.23 Oct. 14, 1929 July 10, 1930 July 29, 1930 Aug. 8, 1930 1930 5.45 3,390 5.46 5.43 3,810 7,40 9,600 6,860 7,120 July 20, 1934 Aug. 22, 1934 Aug. 28, 1934 Sept.23, 1934 1934 6.40 6,100 Aug. 8, 1930 Aug. 13, 1930 6.43 6.37 5.76 9.35 4,150 18,000 Sept. 8, 1930 5,63 5.87 4,540 Jan. 6, 1935 July 31, 1935 Aug. 2, 1935 Aug. 31, 1935 Sept. 2, 1935 1931 Feb. 16, 1931 6.80 8,850 1935 5.54 3,560 Aug. 6, 1931 Aug. 11, 1931 6.55 7.12 7,940 6.24 4,470 6.00 6.01 5.68 9,900 3,750 4,320 Aug. 24, 1931 Aug. 30, 1931 5.23 6.35 3,130 6,770 3,450 Sept.19, 1931 Sept.29, 1931 . 6.14 5,920 Feb. 18, 1936 July 26, 1936 Aug. 20, 1936 Sept.11, 1936 Sept.26, 1936 6.17 5,470 1936 6.56 5,640 5.60 5.61 6.22 3,200 3,780 6,000 6,520 21,500 5,580 1932 Oct. 1, 1931 Feb. 12, 1932 6.65 9.7 Mar. 2, 1932 July 30, 1932 6.20 4,880 6.04 6.82 7,900 a Estimated.

Peak stages and discharges of Gila River at Calva, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Pischarge (cfs)
1937	Feb. 9, 1937 Feb. 18, 1937 Mar. 19, 1937	9.37 8.06 7.25	12,800 8,960 7,260	1952	Jan. 20, 1952 Aug. 17, 1952	11.45 6.08	13,200 3,350
1938	Mar. 5, 1938	6.08	4,310	1953	July 30, 1953	4.93	2,040
1939	Aug. 7, 1939 Sept.17, 1939	6.49 6.60	4,260 4,130	1954	Mar. 25, 1954 Aug. 4, 1954 Aug. 5, 1954	7.13 6.32 6.17	4,260 3,320 3,170
1940	Oct. 9, 1939 Feb. 4, 1940 Aug. 14, 1940 Sept. 7, 1940	7.15 6.67 6.69 6.69	5,620 4,820 5,180 4,600		Aug. 8, 1954 Aug. 12, 1954 Aug. 23, 1954 Aug. 24, 1954 Aug. 25, 1954	6.30 7.05 6.53 6.08 6.51	3,100 3,990 3,550 3,080 3,530
1941	Dec. 27, 1940 Jan. 2, 1941 Jan. 29, 1941 Feb. 8, 1941 Feb. 26, 1941 Mar. 17, 1941 Apr. 28, 1941 Mar. 3, 1941	7.67 9.44 7.52 6.61 5.60 9.06 6.15 6.16	6,200 14,300 7,260 5,180 3,420 13,000 3,990 3,990	1955	July 12, 1955 July 26, 1955 July 31, 1955 Aug. 4, 1955 Aug. 7, 1955 Aug. 20, 1955 Aug. 28, 1955	8.74 10.23 10.34 10.31 9.29 9.15 9.16	3,140 4,920 4,750 4,950 3,710 3,500 3,490
	Aug. 17, 1941 Sept.28, 1941	6.17 6.80	4,700 5,180	1956	Oct. 3, 1955 Oct. 5, 1955 July 29, 1956	9.46 9.83 8.85	3,720 4,240 3,000
1942	Oct. 1, 1941 Dec. 12, 1941 Sept.14, 1942	11.82 6.81 5.58	27,900 5,760 3,320	1957	July 28, 1957 Aug. 8, 1957 Aug. 19, 1957	10.3 10.16 9.5	3,200 3,520 3,400
1943	Mar. 6, 1943 Aug. 24, 1943 Sept.28, 1943	5.60 5.39 5.76	3,590 3,090 3,710		Aug. 23, 1957 Aug. 27, 1957 Aug. 30, 1957 Sept. 1, 1957	9.65 9.7 9.3 10.25	3,560 3,620 3,200 4,220
1944	Aug. 18, 1944 Sept.27, 1944	5.82 9.48	3,260 12,800	1958	Oct. 12, 1957	10.2	5,150
1945	Aug. 3, 1945 Aug. 12, 1945	6.00 6.02	3,390 3,050		Mar. 19, 1958 Mar. 26, 1958 Apr. 19, 1958 Sept.15, 1958	9.77 11.55 9.35 6.69	4,560 6,700 3,850 4,310
1946	Oct. 10, 1945	6.40	4,680		Sept.28, 1958	5.82	3,460
1947	Aug. 24, 1947	6.20	3,200	1959	Aug. 18, 1959 Aug. 26, 1959	5.60 6.5	3,040 3,920
1948	Aug. 7, 1948	6.06	2,570		Aug. 27, 1959 Aug. 29, 1959	6.1 6.2	3,460 3,790
1949	Dec. 30, 1948 Jan. 15, 1949 Jan. 25, 1949 Mar. 10, 1949	6.38 11.47 6.98 7.91	3,030 19,400 5,230 6,290	1960	Dec. 27, 1959 Jan. 14, 1960	6.51 9.7	4,190 9,090
	Aug. 9, 1949	6.24	4,400	1961	Aug. 23, 1961	5.90	3,080
1950	July 30, 1950	5.30	3,210	1962	Dec. 18, 1961 Jan. 27, 1962	6.86 6.30	4,490 4,040
1951	Aug. 4, 1951	5.97	2,970		Feb. 15, 1962 Sept.29, 1962	6.07 8.50	3,150 9,000
1952	Jan. 16, 1952	9.00	7,880	L			

4685. San Carlos River near Peridot, Ariz. (Published as "at San Carlos" prior to 1929)

Location. --Lat 33°19'20", long ll0°26'50", in $NW_{\frac{1}{u}}^{\frac{1}{u}}$ sec.30, T.1 S., R.19 E.(unsurveyed), in San Carlos Indian Reservation, at highway bridge 2 miles downstream from San Carlos and 2 miles upstream from Peridot.

<u>Drainage area.--1,068 sq mi prior to 1929; 1,058 sq mi 1929 to January 1942; and 1,027 sq mi thereafter.</u>

Gage.--Recording. At railroad bridge 2 miles downstream from Peridot at datum 2,506.6 ft above mean sea level (Southern Pacific Railway tench mark) prior to Feb. 1, 1942. Datum of gage is 2,582.71 ft above mean sea level, datum of 1929.

Stage-discharge relation. -- Defined by current-meter measurements below 23,000 cfs and extended above on basis of rate of change in storage in San Carlos Reservoir.

Bankfull stage . -- 11 ft.

Historical data.--Flood of January 1916 was estimated on the ground by W. E. Dickinson, then working for the Interstate Commerce Commission.

Remarks.--Peak discharges unaffected by small irrigation diversions. Base for partial-duration series, 2,200 cfs. Former village of San Carlos, which was located at mouth of San Carlos River 10 miles south of present village, was abandoned in 1929 when San Carlos Reservoir was formed.

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Jan. 18, 1916	-	a25,000	1939	Apr. 5, 1939	5.72	3,160
1930	Mar. 17, 1930 July 12, 1930 Aug. 8, 1930 Aug. 11, 1930	6.85 6.45 6.66 6.60	5,700 4,870 5,270 5,590		July 3, 1939 Aug. 3, 1939 Aug. 5, 1939 Aug. 7, 1939	5.50 7.96 6.28 6.26	2,520 10,200 4,640 4,060
1931	Feb. 15, 1931 July 11, 1931 July 16, 1931 July 29, 1931 Aug. 7, 1931	6.69 6.68 6.10 6.50 7.02	5,800 5,750 3,630 5,100 7,000	1940	Feb. 2, 1940 July 16, 1940 Aug. 3, 1940 Aug. 23, 1940 Sept.29, 1940	5.79 5.74 6.70 6.39 5.55	2,840 2,720 6,000 4,780 2,480
	Aug. 30, 1931 Sept.28, 1931	7.01 6.38	6,950 4,680	1941	Dec. 25, 1940 Dec. 30, 1940 Jan. 12, 1941	9.05 9.1 5.92	14,600 18,100 3,910
1932	Nov. 21, 1931 Dec. 10, 1931 Feb. 10, 1932 Feb. 20, 1932 July 7, 1932 Aug. 6, 1932	5.93 6.20 8.3 6.04 5.88 6.34	3,080 4,000 12,000 3,460 2,910 4,480		Jan. 25, 1941 Jan. 28, 1941 Feb. 7, 1941 Feb. 25, 1941 Mar. 14, 1941 Sept.28, 1941	5.83 6.40 6.6 6.43 11.4 7.12	3,770 5,380 5,990 5,530 40,600 7,670
1933	Sept. 3, 1933 Sept. 8, 1933	7.08 8.04	7,150 11,000	1942	Dec. 12, 1941	5.35	2,520
1934	Aug. 18, 1934 Aug. 22, 1934 Aug. 30, 1934 Sept. 7, 1934	7.35 6.80 5.70 6.84	8,200 6,110 2,320 6,260	1943	Jan. 24, 1943 Jan. 28, 1943 Mar. 5, 1943 Aug. 15, 1943 Sept.26, 1943	4.45 4.20 4.62 4.08 5.16	3,580 2,940 3,450 2,320 5,060
1935	Jan. 6, 1935 Feb. 7, 1935	7.46 8.45	8,630 13,800	1944	Sept.27, 1944	3.88	795
	Feb. 11, 1935 Apr. 9, 1935	6.21 7.11	4,920 7,230	1945	Aug. 9, 1945	5.50	3,200
	July 17, 1935 Aug. 1, 1935 Aug. 8, 1935	7.94 8.05 6.02	10,600 11,100 3,120	1946	July 27, 1946 Sept.18, 1946	7.00 6.20	4,530 2,900
	Aug. 12, 1935 Aug. 24, 1935 Aug. 29, 1935	7.12 8.27 5.80	7,270 12,000 2,340	1947	Aug. 8, 1947 Sept. 6, 1947	11.1 6.28	15,000 2,330
	Sept. 4, 1935	6.14	2,760	1948	Aug. 2, 1948	6.65	2,850
1936	Feb. 13, 1936 Feb. 17, 1936 Feb. 20, 1936	6,89 8.8 5.89	6,370 1 4,4 00 2,580	1949	Jan. 9, 1949 Aug. 9, 1949	6.88 6.26	3,260 2,260
ĺ	July 25, 1936	5.98	2,520	1950	July 21, 1950	6.68	2,150
1937 1938	Feb. 7, 1937 Mar. 4, 1938	10.7 7.35	29,400 8,640	1951	July 27, 1951 Aug. 27, 1951 Aug. 29, 1951	6.81 6.70 7.13	2,420 2,280 2,940
	nual peak only;			i I			

Peak stages and discharges of San Carlos River near Peridot, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Dec. 31, 1951 Jan. 13, 1952	9.82 12.54	9,390 39,200	1956	Jan. 29, 1956	8.88	9,300
	Jan. 18, 1952 Aug. 5, 1952	10.2	23,900	1957	July 26, 1957	9.2	7,310
	Aug. 11, 1952 Aug. 15, 1952	7.70 6.54	6,400 3,300	1958	Oct. 12, 1957 Mar. 14, 1958	5.85 6.0	2,260 2,540
	Aug. 19, 1952	6.24	2,720		Mar. 17, 1958 Mar. 22, 1958	7.3 8.6	4,550 7,670
1953	Aug. 27, 1953	5.48	860		Aug. 16, 1958	6.3	2,900
1954	Mar. 23, 1954 July 12, 1954	11.00 9.27	23,500 11,400	1959	Aug. 18, 1959	5,80	2,280
	July 29, 1954 Aug. 3, 1954	7.47 9.00	4,100 9,900	1960	Oct. 30, 1959 Nov. 2, 1959	6.25 6.60	4,100 4,750
	Aug. 5, 1954 Aug. 22, 1954	7.42 6.90	3,970 2,810		Dec. 26, 1959 Jan. 11, 1960	10.5 8.0	14,300 8,910
1955	July 22, 1955 July 24, 1955 July 29, 1955	6.82 6.73 7.12	2,670 2,510 3,240	1961	July 22, 1961 July 28, 1961 Aug. 22, 1961	7.05 6.10 6.60	5,510 3,860 4,920
	Aug. 3, 1955 Aug. 6, 1955 Aug. 18, 1955 Aug. 19, 1955	8.99 9.82 7.70 8.27	9,840 14,600 4,740 6,600	1962	Dec. 16, 1961 Jan. 1, 1962 Sept.26, 1962	5.9 5.35 5.36	3,800 3,930 4,400
	Aug. 20, 1955 Aug. 23, 1955	8.87 7.62	9,250 4,520				

4695. Gila River below Coolidge Dam, Ariz. (Published as "near San Carlos" 1914-26, and as "at Coolidge Dam" 1927-38)

Location. --Lat 33°10'15", long 110°31'45", in SW_4^1 sec.17, T.3 S., R.18 E. (unsurveyed), 2,200 ft downstream from Coolidge Dam.

Drainage area. -- 12,886 sq mi.

Gage.--Recording. At various sites and datums within 1 mile upstream Aor. 29, 1914, to Mar. 8, 1937; at present site and datum thereafter. Datum of gage is 2,309.33 ft above mean sea level, datum of 1929.

Stage-discharge relation.--1914-37: Defined by current-meter measurements below 7,000 cfs and extended above by logarithmic plotting and comparison with flood records for stations near Solomon and at Kelvin.

1937-62: Defined by current-meter measurements; conforms closely to theoretical rating of Parshall flume.

Historical data.--Notable floods occurred in 1891 and 1905. Flood of 1891 was considered highest in the preceding 25 to 30 years at site near Florence (80 miles downstream). Flood of Nov. 28, 1905, exceeded the 1891 flood at this point. On this basis, flood of Nov. 28, 1905 (estimated discharge, 150,000 cfs), can be considered greatest since about 1861. Discussion and estimates on these floods is contained in WSP 33 and House Document No. 791.

Remarks.--Peak discharges not significantly affected by irrigation diversions.

Completely regulated at Coolidge Dam after Nov. 15, 1928. Base for partial-duration series, 3,500 cfs. Only annual peaks are shown prior to 1916 and subsequent to 1928.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Nov. 28, 1905	-	a150,000	1918	Aug. 6, 1918	8.84	8,630
1914 1915	Aug. 24, 1914 Dec. 20, 1914	8.25 16.4	7,400 42,000	1919	July 2, 1919 July 6, 1919 July 15, 1919	7.7 8.55 9.85	6,400 8,400 11,800
1916	Jan. 20, 1916 Jan. 29, 1916 Mar. 2, 1916 Mar. 25, 1916	25.5 - - 7.7	130,000 a30,000 a5,500 6,400		July 19, 1919 Aug. 3, 1919 Sept.27, 1919	7.65 11.3 6.48	6,300 16,000 4,100
	Aug. 26, 1916 Sept.10, 1916	6.46 7.3	4,000 5,600	1920	Dec. 5, 1919 Feb. 11, 1920 Feb. 21, 1920	11.8 9.2 13.0	18,000 9,700 23,000
1917	Oct. 14, 1916 Jan. 22, 1917	20.4 13	74,000 23,000		Feb. 23, 1920	8.42	7,600

a Estimated.

Peak stages and discharges of Gila River below Coolidge Dam, Ariz. -- Continued

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	July 10, 1921 July 21, 1921 July 27, 1921 July 31, 1921	7.2 6.46 7.57 9.9	5,200 3,950 6,200 12,800	1933 1934 1935	July 11, 1933 Apr. 28, 1934 June 16, 1935	5.98 5.30 5.54	1,040 535 767
	Aug. 4, 1921	8.28	7,500	1936	Apr. 24, 1936	5.80	980
	Aug. 22, 1921	-	al4,000	1937 1938	July 31, 1937	4.35 2,92	1,240 620
1922	Aug. 21, 1922	5.65	2,800	1939 1940	June 19, 1938 Apr. 16, 1939 Aug. 17, 1940	2.94 2.94	620 634
1923	July 22, 1923 Aug. 10, 1923 Aug. 12, 1923 Aug. 20, 1923	10.3 - 7.15	a9,000 13,500 a9,000 5,200	1941 1942 1943 1944	July 22, 1941 Aug. 26, 1942 July 17, 1943 Aug. 7, 1944	4.17 4.07 3.92 3.52	1,110 1,130 1,040 861
1924	Dec. 28, 1923	11.0	15,100	1945	July 16, 1945	2.88	616
192 5	Aug. 1, 1925 Sept. 4, 1925 Sept.17, 1925 Sept.19, 1925	10.3 14.1 9.68 10.57	5,550 14,400 4,380 5,960	1946 1947 1948 1949 1950	Aug. 29, 1946 Mar. 7, 1947 Apr. 12, 1948 July 18, 1949 Apr. 30, 1950	1.98 2.65 2.09 4.07 3.15	345 551 362 1,090
1926	Mar. 30, 1926 Apr. 6, 1926	9.5 11.9	4,650 9,960	1951	Sept.13, 1951	1.90	321
1927	Feb. 15, 1927 Feb. 17, 1927 Sept.12, 1927	11.22 11.9 8.65	7,080 9,100 4,300	1952 1953 1954 1955	July 28, 1952 Dec. 16, 1952 June 24, 1954 July 23, 1955	4.64 2.13 2.67 2.87	1,350 373 545 611
1928	Aug. 25, 1928 Aug. 28, 1928	9.4 9.75	6,500 7,200	1956 1957 1958	Mar. 26, 1956 July 31, 1957 July 12, 1958	4.08 2.56 3.66	1,070 509 924
1929 1930	Sept.26, 1929 Sept. 6, 1930	4.57 5.70	241 954	1959 1960	June 29, 1959 July 20, 1960	3.04	671 861
1931 1932	July 20, 1931 July 24, 1932	5.95 5.94	1,020 980	1961 1962	Feb. 25, 1961 Aug. 16, 1962	1.90 3.33	311 811

a Estimated.

4700. Gila River at Winkelman, Ariz.

Location.--Lat 33°00'10", long 110°45'55", in $NW_{\overline{4}}^{1}NE_{\overline{4}}^{1}$ sec.13, T.5 S., R.15 E., $1_{\overline{4}}^{1}$ miles north of Winkelman, 2 miles upstream from San Pedro River, and 29 miles downstream from Coolidge Dam.

Drainage area. -- 13,268 sq mi (includes 382 sq mi below Coolidge Dam).

Gage.--Recording. Datum of gage is 1,920.95 ft above mean sea level, datum of T929, supplementary adjustment of 1949.

Stage-discharge relation.--Defined by current-meter measurements below 2,900 cfs and extended above on basis of slope-area measurement at gage height 18.40 ft.

Remarks. --Runoff from area above Coolidge Dam is completely regulated. Peak discharges are adjusted by amount of released water to show natural flow from 382 sq mi drainage area below Coolidge Dam, and differ in some instances from previously published figures. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height height (feet) Date vear (cfs) year (cfs) (feet) 1942 8, 1942 Aug. 15, 1946 Aug. 20, 1946 5.05 10.70 Aug. 7.95 3,950 1946 1,400 12,500 Mar. 5, 1943 July 30, 1943 Aug. 3, 1943 1943 5.37 5.45 6.28 1.550 Aug. 30, 1946 Sept.10, 1946 6.10 2,320 1,010 2,120 5,470 4.85 7.72 6.5 Sept.19, 1946 Sept.27, 1946 5,010 Sept.26, 1943 8.70 5.60 6.15 Oct. 19, 1943 Aug. 7, 1944 Aug. 9, 1944 1944 Aug. 8, 1947 Aug. 12, 1947 Sept.19, 1947 24,300 1,570 1,830 1947 13.68 5.54 1,920 18.40 54,500 6.10 2,420 Aug. 1945 4.70 1,040 1948 July 26, 1948 4.89 1,220 Aug. 9, 1945 Aug. 21, 1945 5.37 1,650 5.59 1949 June 18, 1949 5.85 1,630 July 30, 1949 Sept.13, 1949 1,100 5.38 1946 7, 1945 5, 1946 Oct. 5.03 1,100 6.70 Jan. 4.85 1,210

Peak stages and discharges of Gila River at Winkelman, Ariz .-- Continued

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Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	July 7, 1950 July 21, 1950 July 30, 1950	5.13 6.97 7.90	1,330 3,550 4,960	1955	Aug. 13, 1955 Aug. 24, 1955	6.25 8.50	1,390 4,180
1951	Aug. 2, 1951	15.15	26,100	1956	July 29, 1956	5.85	1,100
	Aug. 27, 1951	6.90	2,810	1957	Aug. 12, 1957	5.76	920
1952	Dec. 31, 1951 Jan. 13, 1952	5,63 6,25	1,670 2,2 4 0	1958	Oct. 12, 1957 Sept. 3, 1958	6.60 6.99	1,350 1,600
1953	Aug. 25, 1953	4,38	640	1959	Oct. 6, 1958	5.95	1,230
1954	Mar. 23, 1954 July 20, 1954 July 31, 1954 Aug. 2, 1954 Aug. 3, 1954 Aug. 5, 1954	8.44 5.76 6.49 6.45 8.47 17.89	4,590 1,300 1,640 1,880 4,640 51,700	1960	Oct. 29, 1959 Oct. 30, 1959 Dec. 25, 1959 Dec. 26, 1959 Sept. 9, 1960	6.76 7.05 6.44 7.44 7.08	1,730 2,020 1,580 2,370 1,520
	Aug. 23, 1954 Sept.24, 1954	5.84 7.24	1,370 2,570	1961	Aug. 3, 1961 Aug. 22, 1961	6.75 17.15 7.96	1,730 - 2,670
1955	July 22, 1955 July 25, 1955	6.45 12.0	1,200 13,200		Sept. 8, 1961 Sept.11, 1961	6.00	1,240
	July 29, 1955	7.90	3,250	1962	July 22, 1962	5,66	420

4705. San Pedro River at Palominas, Ariz.

Location.--Lat $31^{\circ}22^{\circ}48''$, long $110^{\circ}06^{\circ}38''$, on section line between sec.33, T.23 S., R.22 E., and sec.4, T.24 S., R.22 E., at highway bridge 0.7 mile east of Palominas, $2\frac{3}{4}$ miles upstream from Greenbush Creek, $4\frac{1}{2}$ miles downstream from international boundary, and 13 miles southwest of Bisbee.

Drainage area. -- 741 sq mi, of which 649 sq mi is in Mexico.

Gage.--Recording. Prior to Oct. 18, 1936, at datum 3.71 ft higher; Oct. 18, 1936, to Oct. 10, 1939, at datum 3.91 ft higher; Oct. 11, 1939, to July 16, 1941, at datum 0.29 ft lower; July 17, 1950, to Feb. 13, 1955, at present datum; Feb. 14, to Nov. 23, 1955, at site 400 ft downstream at datum 1.84 ft lower. Datum of gage is 4,187.62 ft above mean sea level (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 5,600 cfs and extended above on basis of slope-area measurement at gage height 16.16 ft, present datum.

<u>Historical data.</u>-Flood of Sept.28, 1926, reached a stage of about 23.9 ft, present datum, from floodmarks (discharge not determined).

Remarks.--Peak discharges unaffected by small irrigation diversions. Ease for partial-duration series, 2,400 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Sept.28, 1926	23.9	-	1936	Aug. 19, 1936	6.83	3,200
1930	July 22, 1930 July 28, 1930 Aug. 7, 1930	7.96 7.69 9.75	4,040 3,500 9,400	1937	July 18, 1937 Aug. 17, 1937	10.15 5.75 6.55	13,500 2,650 4,060
1931	Aug. 1, 1931 Aug. 6, 1931 Aug. 8, 1931	7.72 7.50 9.6	3,380 3,460 8,900		Aug. 20, 1937 Aug. 23, 1937 Aug. 26, 1937 Sept. 7, 1937	8.31 6.90 6.78 5.64	8,090 4,860 4,730 2,860
1932	Aug. 30, 1931 Sept. 1, 1931 Oct. 1, 1931	7.61 7.71 7.46	3,780 3,940	1938	July 28, 1938 Aug. 7, 1938	5.77 7.55	3,040 6,300
1932	July 29, 1932 Aug. 9, 1932	8.3 8.0	3,490 5,180 6,000	1939	July 17, 1939 July 22, 1939 Aug. 3, 1939	5.18 6.30 6.77	3,140 4,230 4,960
1933	July 13, 1933 Sept.19, 1933	7.75 8.1	4,020 4,700		Aug. 6, 1939	8.05	7,500
1935	Aug. 14, 1935	6.74	3,000	1940	July 25, 1940 Aug. 4, 1940	10.12 9.54	3,820 3,150
1936	July 1, 1936	6. 4 0	2,420		Aug. 14, 1940	16.45	22,000

Peak stages and discharges of San Pedro River at Palominas, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Jan. 28, 1941	11.50	a5,900	1955	Aug. 9, 1955	5.95	3,430
1950	July 5, 1950 July 21, 1950 July 30, 1950	8.5 7.67 6.51	6,270 5,150 3,610		Aug. 10, 1955 Aug. 19, 1955 Aug. 21, 1955 Aug. 26, 1955	5.45 6.95 7.95 6.90	2,860 4,580 5,730 4,520
1951	July 2, 1951 Aug. 26, 1951	8.10 5.80	5,710 2,760	1956	July 17, 1956 July 26, 1956 Aug. 26, 1956	8.66 5.90 8.38	4,640 2,660 4,450
1952	Aug. 5, 1952 Aug. 8, 1952 Aug. 16, 1952	6.05 7.54 9.15	3,000 4,890 7,400	1957	Aug. 20, 1957	5.74	2,540
1953	July 6, 1953 July 7, 1953 July 13, 1953 July 17, 1953 July 18, 1953	6.85 11.68 7.20 7.10 6.60	3,990 11,900 4,500 4,380 3,740	1958	July 5, 1958 Aug. 5, 1958 Aug. 6, 1958 Aug. 14, 1958 Aug. 24, 1958 Sept. 1, 1958	6.22 12.61 9.16 7.62 6.70 8.40	2,560 16,500 9,560 4,450 3,500 5,910
1954	July 20, 1954 July 22, 1954 July 23, 1954 July 24, 1954 July 31, 1954 Aug. 3, 1954 Aug. 6, 1954 Aug. 6, 1954 Aug. 12, 1954	7.60 6.30 6.68 5.92 14.40 10.00 9.55 5.97 7.76	5,020 3,360 3,840 2,900 17,300 8,710 7,960 2,960 5,230	1959	Sept.12, 1958 Sept.23, 1958 June 29, 1959 July 27, 1959 July 28, 1959 Aug. 13, 1959 Aug. 16, 1960	5.82 7.95 5.36 11.19 5.45 5.26 5.68 5.51	2,590 5,690 2,480 13,000 2,860 2,670 3,120 3,410
1955	Aug. 14, 1954 July 22, 1955 July 26, 1955 July 29, 1955 July 31, 1955 Aug. 3, 1955 Aug. 7, 1955	5.67 5.90 5.40 8.4 5.70 6.25	6,510 3,110 3,370 2,800 6,250 3,140 3,780	1961	July 16, 1961 July 28, 1961 July 29, 1961 Aug. 11, 1961 Aug. 13, 1961 Aug. 29, 1961 July 26, 1962	4.63 5.58 5.85 5.61 5.16 5.08 6.20	2,430 3,500 3,820 3,530 3,020 2,930 4,130

a Maximum for period Oct. 1 to July 16; probably exceeded by flood of Aug. 16, 1941.

4710. San Pedro River at Charleston, Ariz. (Published as "near Fairbank" 1911-26)

- Location. --Lat 31°37'40", long 110°10'30", in NE LNE sec.11, T.21 S., R.21 E., in Spanish land grant of San Juan de las Boquillas y Nogales, at highway bridge a quarter of a mile south of Charleston, lamiles upstream from Charleston damsite, 8 miles upstream from Babocomari River, and 29 miles upstream from Benson.
- Drainage area. --1,253 sq mi for sites used 1904 to November 1911 and 1928 to November 1942; 1,300 sq mi, approximately, for sites used November 1911 to September 1926; 1,219 sq mi for site used since December 1942. All areas include 696 sq mi in Mexico.
- <u>Gage.</u>--Nonrecording and recording at various sites within $6\frac{1}{2}$ miles downstream at different datums prior to Dec. 1, 1942; recording at present site and datum thereafter. Datum of gage is 3,954.01 ft above mean sea level, datum of 1929, supplementary adjustment of 1958.
- Stage-discharge relation. --Defined by current-meter measurements below 7,800 cfs and extended above on basis of slope-area measurement at 98,000 cfs. Relation prior to Nov. 30, 1942, subject to considerable shifting.
- <u>Historical data</u>.--Flood of Sept. 28, 1926, is the greatest known since 1906 or earlier.
- Remarks.--Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 3,000 cfs.

Peak stages and discharges of San Pedro River at Charleston, Ariz.

					ver at chartesto		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Itscharge
1916	Aug. 11, 1916 Aug. 16, 1916 Sept. 7, 1916	3.9 5.7 4.0	3,100 7,700 3,300	1933	July 13, 1933 July 22, 1933 Sept.17, 1933 Sept.20, 1933	6.2 8.45 7.3 6.85	4,130 9,600 6,550 5,500
1917	Oct. 13, 1916 July 14, 1917	4.5	4,400 a4,000	1934	-		a b5,000
	July 18, 1917 July 24, 1917 Aug. 2, 1917 Aug. 9, 1917 Aug. 12, 1917 Sept. 8, 1917	6.0 4.8 5.0 4.0 7.3 4.0	8,600 5,150 5,700 3,300 13,000 3,300	1935	Aug. 2, 1935 Aug. 14, 1935 Aug. 28, 1935 Aug. 31, 1935	5.9 5.95 8.1 5.96	3,780 3,870 8,600 3,890
1918	June 20, 1918 July 1, 1918	4.15	3,610 a4,000	1936	July 25, 1936 Aug. 19, 1936 Sept.11, 1936	7.55 6.0 9.5	7,210 3,250 13,000
1919	July 3, 1919 July 5, 1919 July 7, 1919 July 14, 1919 July 28, 1919 July 31, 1919 Aug. 2, 1919	6.0 7.6 8.4 6.8 4.5 4.6	8,600 14,100 17,200 11,300 4,400 4,640 3,300	1937	Aug. 9, 1937 Aug. 18, 1937 Aug. 20, 1937 Aug. 23, 1937 Aug. 26, 1937 Sept. 8, 1937	6.4 6.02 8.5 6.7 6.85 5.80	4,720 4,000 9,430 4,920 5,030 3,150
1920	Aug. 16, 1919 Aug. 1, 1920 Sept. 5, 1920	3.30 3.9	25,100 3,300 4,500	1938	July 28, 1938 Aug. 2, 1938 Aug. 7, 1938	7.06 7.25 7.74	5,700 6,180 7, 4 50
1921	July 3, 1921 July 19, 1921 July 27, 1921 July 31, 1921	16.5 20.2 14.0 16.9	10,200 19,000 5,000 11,200	1939	July 22, 1939 Aug. 3, 1939 Aug. 7, 1939 Sept. 7, 1939	6.50 7.40 8.45 6.85	4,360 6,480 9,370 5,370
	Aug. 4, 1921 Aug. 6, 1921 Aug. 8, 1921	14.6 14.3 14.5	6,200 5,400 5,800	1940	July 16, 1940 Aug. 13, 1940	8.8 13.1	10,700 31,000
1922	Aug. 19, 1921 Aug. 10, 1922	13.6 13.35	4,100 3,630	1941	Jan. 28, 1941 Aug. 9, 1941 Aug. 16, 1941	7.00 7.0 8.53	6,700 6,700 10,800
1923	Sept. 9, 1922 July 14, 1923	13.4	3,720	1942	July 24, 1942	4.95	2,870
	Aug. 12, 1923	14.0 14.2	4,820 5,200	1943	June 29, 1943 Aug. 6, 1943	8.22 8.22	8,380 8,380
1924 1925	July 24, 1924 June 24, 1925	12.2	1,900		Aug. 9, 1943 Aug. 18, 1943	8.20 8.07	8,650 7,860
1040	July 27, 1925 Aug. 6, 1925	10.3 7.95 12.1	7,340 3,940 11,900	1944	Aug. 18, 1944	6.87	3,430
1000	Aug. 9, 1925 Sept. 3, 1925	7.5 8.2	3,450 4,260	1945	Aug. 7, 1945 Aug. 9, 1945 Aug. 21, 1945	7.65 7.95 6.90	6,600 7,670 4,1 80
1926	Sept.26, 1926 Sept.28, 1926	11.85 21.9	10,500 98,000	1946	July 17, 1946 July 29, 1946	7.90 6.78	7, 4 90 3,900
1927	Oct. 9, 1926 July 8, 1927 Aug. 7, 1927	8.5 8.0 8.5	a5,100 a3,600 a4,260	1947	Aug. 4, 1946 Aug. 9, 1947	9.10 8.60	12,000
1928	July 15, 1928	6.02	3,800		Aug. 12, 1947 Aug. 15, 1947 Aug. 22, 1947	6.64 7.05 7.20	10,100 3,760 4,620 5,080
1929	Oct. 11, 1928 July 17, 1929	6.95 6.58	5,720 4,910		Aug. 28, 1947	6.57	3,120
	July 27, 1929 July 29, 1929 Aug. 2, 1929 Aug. 8, 1929	6.56 8.74 6.15 5.85	4,870 10,400 4,030 3,460	1948	July 24, 1948 Aug. 3, 1948 Aug. 12, 1948 Sept.18, 1948 Sept.26, 1948	7.25 8.0 7.85 6.80 7.6	5,400 7,850 7,310 3,900 5,080
1930	July 19, 1930 July 22, 1930 July 28, 1930 Aug. 7, 1930 Aug. 10, 1930	6.0 6.50 6.05 8.5 5.95	3,740 4,740 3,840 9,740 3,640	1949	July 19, 1949 July 22, 1949 July 24, 1949 Aug. 8, 1949	7.15 7.10 7.65 6.9	5,160 5,010 6,720 4,460
1931	Aug. 2, 1931 Aug. 6, 1931 Aug. 9, 1931 Aug. 27, 1931	5.95 6.20 12.0 6.5	3,640 4,090 24,500 4,740	1950	July 6, 1950 July 21, 1950 July 30, 1950	7.48 7.15 6.72	6,070 4,920 3,630
	Aug. 30, 1931 Sept.18, 1931	6.3 6.0	4,330 3,740	1951	July 2, 1951 Aug. 26, 1951	7.4 6.9	5,7 3 0 4,180
1932	Oct. 1, 1931 July 30, 1932 Aug. 9, 1932 mated.	6.2 6.4 7.5	4,130 4,530 7,000	1952	Aug. 9, 1952 Aug. 10, 1952 Aug. 17, 1952	6.45 7.7 8.0	3,120 6,770 7,850

a Estimated. b Annual peak only.

Peak stages and discharges of San Pedro River at Charleston, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Aug. 19, 1952	7.05	4,680	1 9 55	Aug. 26, 1955	7.50	5,860
1953	July 7, 1953 July 13, 1953 July 17, 1953 July 25, 1953	8.2 6.43 6.70 6.50	8,590 3,120 3,720 3,230	1956 1957	July 18, 1956 Aug. 27, 1956 July 25, 1957	7.7 6.5 7.65	6,550 3,340 6,000
1954	July 18, 1954 July 20, 1954 July 21, 1954 July 22, 1954 July 24, 1954 Aug. 1, 1954 Aug. 5, 1954 Aug. 12, 1954 Aug. 15, 1954 Aug. 15, 1954 Aug. 15, 1954	9.75 7.70 6.60 7.70 7.80 10.05 10.20 8.35 8.40 12.20 7.50	14,500 6,770 3,350 6,770 7,130 14,300 14,100 8,190 8,340 23,600 5,860	1958	Aug. 18, 1957 July 18, 1958 July 29, 1958 Aug. 5, 1958 Aug. 6, 1958 Aug. 16, 1958 Aug. 16, 1958 Aug. 24, 1958 Aug. 24, 1958 Sept. 1, 1958 Sept. 1, 1958	7.07 6.62 6.41 8.60 7.84 6.70 7.00 7.10 6.65 7.25 7.03	4,550 3,490 3,100 8,400 6,280 3,650 4,270 4,490 3,550 4,820 4,340
1955	July 20, 1955 July 22, 1955 July 26, 1955 Aug. 1, 1955 Aug. 2, 1955 Aug. 3, 1955 Aug. 6, 1955 Aug. 9, 1955 Aug. 11, 1955	6.45 7.91 6.65 7.46 7.07 7.14 10.07 9.70 6.70	3,120 7,350 3,180 5,780 4,740 3,940 14,400 13,000 3,840	1959 1960 1961	July 27, 1959 Aug. 13, 1959 Aug. 15, 1959 Aug. 11, 1960 July 30, 1961 Aug. 10, 1961	8.34 7.28 6.34 6.78 6.63 6.43	7,480 4,880 3,030 3,900 3,620 3,220
	Aug. 20, 1955	8.90	9,990	1962	July 28, 1962	6.61	3,580

4711.9. Agricultural Research Service Tombstone watershed W-II, Arizona

Location. -- Lat 31°44'05", long 110°05'52", in SE $\frac{1}{4}$ sec.33, T.19 S., R.22 E., 2 miles northwest of Tombstone, Cochise County.

Drainage area. -- 43.9 sq mi.

Gage .-- Recording, with 8-hour chart.

Stage-discharge relation .-- Critical-depth flume.

 $\frac{\text{Remarks.--Only annual peaks are shown.}}{\text{Research Service, U.S. Department of Agriculture.}}$

Peak stages and discharges

Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	Discharge (cfs)
1954 1955	Oct. 4, 1954 July 25, 1955	-	2,900 12,100	1959 1960	July 26, 1959 Aug. 23, 1960	-	3,680 156
1956 1957 1958	July 19, 1956 Aug. 17, 1957	- - -	422 19,200 5,500	1961 1962	Aug. 17, 1961 July 27, 1962	- -	2,010 1,820

4712. Agricultural Research Service Tombstone watershed W-I, Arizona

Location. --Lat 31°43'40", long 110°09'55", in NE $\frac{1}{4}$ sec.2, T.20 S., R.21 E., 5.8 miles west of Tombstone, on Walnut Gulch, Cochise County.

Drainage area .-- 57.7 sq mi.

Gage .-- Recording, with 8-hour chart.

Stage-discharge relation .-- Cutoff wall in natural channel.

Remarks.--Only annual peaks are shown. Records furnished by Agricultural Research Service, U.S. Department of Agriculture.

Peak stages and discharges of Agricultural Research Service Tombstone watershed W-I, Ariz.

Calen- dar year	Date	Gage height (feet)	Discharge (cfs)	Calen- dar year	Date	Gage height (feet)	lischarge (cfs)
1957 1958 1959 1960	Aug. 17, 1957 Aug. 16, 1958 July 26, 1959 Aug. 21, 1960	- - -	20,000 6,100 4,940 52	1961 1962	Aug. 22, 1961 July 25, 1962	-	6,910 1,230

4720. San Pedro River near Redington, Ariz.

Location. --Lat 32°22'50", long 110°26'40", in $NE_{\frac{1}{4}}^{\frac{1}{4}}NW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.19, T.12 S., R.19 E., half a mile upstream from Cochise-Pima County line, $4\frac{1}{2}$ miles upstream from Redington, and 30 miles downstream from Benson.

Drainage area. -- 2,939 sq mi (includes 696 sq mi in Mexico).

Gage.--Recording. At site 400 ft downstream at datum 2.98 ft lower pricr to July 1950. Datum of gage is 2,940.51 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below £,400 cfs and extended above on basis of slope-area measurement at 28,600 cfs and records for adjacent stations.

Historical data.--The greatest known flood was that of Sept. 28, 1926 (gage height, 21.5 ft, former datum, from floodmark), discharge estimated as 90,000 cfs on basis of records for stations at Charleston and Gila River at Kelvin.

 $\underline{\underline{\text{Remarks.}}\text{--Peak}}$ discharges unaffected by irrigation diversions. Base for partial-duration series, 3,000 cfs.

			Peak stages a	tild dibon	ar Sep		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Sept.28, 1926	21.5	a90,000	1954	Aug. 7, 1954 Aug. 12, 1954	8.9 9.6	3,520 4,470
1943	June 29, 1943 Aug. 6, 1943	6.03 5.92	4,590 3,910		Aug. 15, 1954	11.5	7,820
	Aug. 9, 1943	7.40	7,090	1955	July 16, 1955 July 23, 1955	9.0 13.8	4,060 15,000
1944	Aug. 9, 1944 Aug. 18, 1944 Sept.24, 1944	8.2 5.10 11.05	9,240 3,090 19,000		July 26, 1955 July 30, 1955 July 31, 1955 Aug. 4, 1955	10.2 10.0 11.0 9.3	6,720 7,260 9,540 5,610
1945	Aug. 7, 1945 Aug. 10, 1945 Aug. 21, 1945	5.45 9.90 6.52	3,900 1 4 ,600 5,720		Aug. 7, 1955 Aug. 9, 1955 Aug. 21, 1955	15.4 10.8 11.1	18,800 9,1 4 0 9,960
1946	Oct. 5, 1945	5.11	3,080		Aug. 27, 1955	6.6	3,440
	Aug. 4, 1946	8.25	9,000	1956	Oct. 2, 1955 July 30, 1956	5.2 6.3	3,010 3,160
1947	Aug. 8, 1947 Aug. 9, 1947 Aug. 15, 1947	12.0 8.12 4.90	23,000 9,280 3,000	1957	July 26, 1957 Aug. 18, 1957 Aug. 22, 1957	4.27 9.90 6.56	3,260 9,300 4,120
1948	Sept.26, 1948	9.1	all,500	2.0=0			,
1949	-	8.4	a10,000	1958	July 19, 1958 July 29, 1958	5.65 7.30 9.74	4,310 7,580 9,950
1950	July 7, 1950 July 20, 1950 July 23, 1950 July 30, 1950	8.48 11.4 9.1 12.0	3,720 7,830 4,470 8,800		Aug. 6, 1958 Aug. 6, 1958 Aug. 12, 1958 Aug. 17, 1958 Aug. 21, 1958 Aug. 24, 1958	6.90 5.65 10.03 7.32 7.30	5,070 3,210 10,800 5,270 4,410
1951	Aug. 2, 1951	18.0	28,600		Sept. 1, 1958 Sept. 23, 1958	6.87 6.10	4,270 3,770
1952	July 28, 1952 July 29, 1952 Aug. 16, 1952	9,2 9,4 9,5	3,910 4,330 4,470	1959	July 16, 1959 July 26, 1959 July 27, 1959	6.10 8.50 9.68	4,050 6,290 8,580
1953	July 7, 1953	11.0	7,290		July 29, 1959 Aug, 7, 1959	8.80 8.65	6,350 6,270
1954	July 20, 1954 July 21, 1954	10.3	5,560 4,770	1960	Sept. 5, 1960	5.83	1,980
	July 23, 1954 July 25, 1954 Aug. 1, 1954	8.7 8.5 15.2	3,280 3,040 18,500	1961	July 30, 1961 Aug. 29, 1961	6.70 4.90	3,800 3,350
	Aug. 3, 1954 Aug. 4, 1954 Aug. 6, 1954	11.8 10.6 9.3	8,430 6,070 4,050	1962	July 28, 1962	5.32	2,050

4725. San Pedro River near Mammoth, Ariz.

Location.--Lat 32°44'35", long 110°38'50", in $NE_{u}^{1}NW_{u}^{1}$ sec.18, T.8 S., R.17 E., at bridge on Mammoth-Winkelman highway, $1\frac{1}{2}$ miles north of Mammoth.

Drainage area. -- 3,599 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 2,306.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1949.

Stage-discharge relation.--Defined by current-meter measurements below 5,300 cfs and extended above on basis of four float measurements between 20,000 and 41,000 cfs. Relation is subject to large shifts.

Historical data. -- Greatest known flood was that of Sept. 28, 1926 (gage height unknown); discharge, about 90,000 cfs, estimated on basis of records for stations at Charleston and Gila River at Kelvin.

 $\underline{\text{Remarks.}\text{--Peak}}$ discharges unaffected by irrigation diversions. Base for partial-duration series, 4,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	Sept.28, 1926	-	a90,000	1937	Aug. 20, 1937 Aug. 22, 1937	9.40 9.5	12,800 14,000
1931	Aug. 5, 1931 Aug. 7, 1931 Aug. 10, 1931 Aug. 14, 1931 Aug. 24, 1931	8.4 8.58 10.9 8.4 9.3	5,210 5,550 18,000 4,740 8,270		Aug. 22, 1937 Aug. 27, 1937 Aug. 30, 1937 Sept. 5, 1937 Sept. 7, 1937	8.55 9.6 8.47 8.22	7,960 14,100 7,530 6,760
	Aug. 30, 1931 Sept.19, 1931	9.2 8.9	8,270 4,970	1938	June 28, 1938 July 29, 1938 Aug. 3, 1938	9.15 9.74 9.3	4,580 6,000 5,090
1932	Oct. 2, 1931 Aug. 10, 1932	11.1 8.8	19,400 7,250		Aug. 5, 1938 Aug. 8, 1938	10.5 10.00	7,800 6,600
1933	July 23, 1933 Sept.10, 1933	9.8 8.6	13,500 5,440	1939	July 19, 1939 Aug. 2, 1939 Aug. 6, 1939	9.35 9.65 9.85	8,660 9,920 9,710
1934	Aug. 4, 1934	8.40	7,400		Sept.11, 1939 Sept.17, 1939	9.52 8.7	9,290
1935	Aug. 14, 1935 Aug. 24, 1935 Aug. 28, 1935 Sept. 1, 1935	9.13 10.65 10.3 8.55	5,300 16,300 14,000 4,600	1940	Aug. 14, 1940 Aug. 24, 1940	12.7 8.4	50,000 6,570
1936	July 26, 1936 Aug. 9, 1936 Sept.11, 1936	8.40 8.2 8.9	7,960 8,220 10,400	1941	Dec. 31, 1940 Jan. 29, 1941	9.4 9.7	8,870 b10,100

a Annual peak only; estimated.

b Maximum for period October to June.

4730. Aravaipa Creek near Feldman, Ariz.

<u>Location</u>.--Lat 32°50', long 110°38', in NW_{li}^{1} sec.9, T.7 S., R.17 E., 6 miles upstream from mouth, 6 miles east of Feldman (now known as PZ Ranch), and $8\frac{1}{2}$ miles north of Mammoth.

Drainage area. -- 562 sq mi at site used 1919-21; 542 sq mi at present site.

Gage. -- Nonrecording Apr. 21, 1919, to Sept. 30, 1921, at ford 5⁷/₂ miles downstream and a quarter of a mile upstream from mouth, at different datum; recording May 23, 1931, to Jan. 1, 1941, at site 100 ft downstream at datum 0.32 ft lower; nonrecording thereafter. Altitude of gage is 2,345 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements 1919-21 below 5,100 cfs; 1931-41 below 3,000 cfs, and extended above on basis of velocity-area studies.

Remarks.--Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 2,500 cfs.

Peak stages	and	discharges	Ωſ	Aravaina	Creek	near	Feldman.	Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	Aug. 2, 1919	6.3	a20,000	1936	Feb. 15, 1936	7,57	3,800
1920	Jan. 5, 1920	4.03	a7,400		July 22, 1936 July 25, 1936 Aug. 9, 1936	7.2 9.1 7.55	3,220 6,500 3,770
1921	July 31, 1921	5.0	al2,600		Aug. 9, 1936 Sept. 7, 1936	7.1	3,070
1931	Aug. 20, 1931	8,11	4,700	1937	Feb. 7, 1937	7,30	3,380
1932	Oct. 1, 1931 Dec. 10, 1932	9.0 6.92	6,300 2,800	1938	Mar. 4, 1938	7.56	3,600
	Feb. 10, 1932 Aug. 9, 1932	7.75 6.79	4,090 2,610	1939	Aug. 5, 1939 Aug. 7, 1939 Sept. 8, 1939	9.1 7.4 7.3	6,450 3,340 3,170
1933	July 16, 1933 July 23, 1933	7.1 10.5	3,070 9,340	7040	Sept.11, 1939	8.25	4,830
1934	July 20, 1934 Aug. 30, 1934	7.12 6.85	3,100 2,700	1940	Oct. 7, 1939 Feb. 23, 1940 June 23, 1940 June 26, 1940	8.35 7.20 6.97 7.22	4,920 3,080 2,600 2,950
1935	Jan. 6, 1935 Feb. 7, 1935 Aug. 2, 1935	7.75 8.0 7.35	4,090 4,500 3,460		Aug. 4, 1940 Sept.21, 1940	7.15 8.6	2,840 5,480
	Aug. 13, 1935 Aug. 15, 1935 Aug. 24, 1935	6.79 10.9 10.3	2,610 10,200 8,900	1941	Nov. 19, 1940 Dec. 31, 1940 Feb. 7, 1941	8.4 10.88 7.7	4,450 b9,600 5,400
	Aug. 29, 1935	10.2	8,690		Mar. 16, 1941	7.7	5,400

a Annual peak only.

4740. Gila River at Kelvin, Ariz.

<u>Location</u>.--Lat 33°06'10", long 110°58'45", in $NW_{\overline{u}}^1NW_{\overline{u}}^1$ sec.12, T.4 S., R.13 E., at Kelvin, 1,000 ft downstream from Mineral Creek, 17 miles downstream from San Pedro River, and $19\frac{1}{2}$ miles upstream from Ashurst-Hayden Dam.

Drainage area. -- 18,011 sq mi, of which 5,125 sq mi is below Coolidge Dam.

Gage. --Nonrecording Jan. 26, 1911, to June 14, at several sites within three-quarters of a mile downstream at different datums; Dec. 1, 1914, to Aug. 31, 1915, at several sites from 1½ miles upstream to half a mile downstream, except for March 1915 at Florence; all gage-height readings reduced to present datum. Recording June 15 to Nov. 30, 1914, and since Sept. 1, 1915, at present site. Datum of gage is 1,743.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1949.

Stage-discharge relation.--Defined by current-meter measurements below 33,000 cfs and extended above on basis of slope-area measurement at 82,000 cfs.

Historical data. -- A peak discharge of 102,000 cfs Feb. 22, 1891, by slop?-area measurement, was observed at station at the Buttes, 15½ miles downstram. This flood was considered highest in at least the preceding 25 to 30 years. Flood of Nov. 28, 1905, was estimated as 190,000 cfs. Discussion of these floods and basis for estimates can be found in WSP 33 and House Document No. 791.

Remarks.--Prior to Nov. 15, 1928, peak discharges unaffected by irrigation diversions. Since Nov. 15, 1928, flow from area above Coolidge Dam has been completely regulated, and peak discharges represent natural runoff from drainage area below the dam, which is affected only to a minor extent by releases at the dam. Base for partial-duration series, 6,000 cfs prior to Nov. 15, 1928; 4,000 cfs thereafter.

b Probably maximum for year; no record July to September.

Peak stages and discharges of Gila River at Kelvin, Ariz.

	reak s	tages and	discharges o	1 Gila n	iver at kervin,	Allz.	
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	Feb. 22, 1891	-	a102,000	1930	July 8, 1930 July 10, 1930	5.69 5.76	5,690 6,310
1906	Nov. 28, 1905	-	ab190,000		July 20, 1930 Aug. 8, 1930	6.02	7,500 42,800
1912	Mar. 12, 1912 July 25, 1912 July 30, 1912 Aug. 31, 1912	16.0 10 8.4 8.5	35,000 12,500 7,300 7,600	1931	Sept. 7, 1930 Feb. 16, 1931 Aug. 3, 1931	5.05 5.97 5.02	4,360 6,030 4,020
1913	Feb. 25, 1913	6.5	4,400		Aug. 10, 1931 Aug. 30, 1931	7.65	11,800 28,600
1914	Aug. 19, 1914 Sept.15, 1914 Sept.21, 1914	7.55 4.68 8.26	16,700 6,700 18,000	1932	Sept.19, 1931 Oct. 2, 1931 Dec. 10, 1931 Feb. 10, 1932	7.5 5.50 6.0	4,020 12,800 4,850 6,060
1915	Oct. 6, 1914 Dec. 21, 1914 Dec. 24, 1914	5.6 14.0 15.1	8,500 55,000 67,300		July 1, 1932 Aug. 10, 1932	5.31 5.34	4,850 4,950
	Jan. 1, 1915 Jan. 20, 1915 Reb. 21, 1915	7.1 15.0 8.6	12,800 66,000 18,600	1933	July 24, 1933 Aug. 20, 1933	6.45 5.27	8,800 4,39 0
	Feb. 21, 1915 Mar. 27, 1915 Apr. 1, 1915 Apr. 8, 1915 July 26, 1915	4.9 5.0 5.4 7.3	6,000 6,400 7,800 13,200	1934	July 20, 1934 Aug. 23, 1934 Sept.23, 1934	5.26 5.82 5.47	4,590 6,750 5,140
1916	Jan. 20, 1916 Jan. 29, 1916 Mar. 24, 1916 Sept. 9, 1916	19.5 10.35 5.50 7.0	132,000 27,000 6,400 11,600	1935	Jan. 6, 1935 Feb. 7, 1935 Aug. 2, 1935 Aug. 10, 1935 Aug. 15, 1935 Aug. 24, 1935 Aug. 29, 1935	5.25 5.90 6.10 5.02 6.44 8.4	4,390 6,670 7,400 4,060 9,030 12,200
1917	Oct. 15, 1916 Jan. 23, 1917	14.0	55,000 20,000		Aug. 29, 1935 Sept. 1, 1935	9.30 5.50	21,000 7, 4 00
1918	Aug. 6, 1918	7.9	15,100	1936	July 26, 1936 Aug. 9, 1936	5.30 6.38	4,780 8,310
1919	July 3, 1919 July 6, 1919 July 16, 1919 July 28, 1919	5.1 5.54 7.55 5.63	6,420 7,800 14,200 7,100	1937	Sept.11, 1936 Feb. 7, 1937 Aug. 21, 1937	7.45 6.60 6.94	12,600 8,7 4 0 10,200
	Aug. 3, 1919 Aug. 27, 1919	9.2 5.65	20,800 7,000	1938	Aug. 5, 1938 Aug. 8, 1938	6.55 6. 4 5	5,660 5,360
1920	Dec. 5, 1919 Feb. 11, 1920 Feb. 21, 1920	10.25 6.4 7.3	25,800 9,200 13,000	1939	Aug. 3, 1939 Aug. 7, 1939	6.55 7.63	5,470 9,320
1921	July 11, 1921 July 28, 1921 July 31, 1921 Aug. 9, 1921	5.5 6.25 9.8	6,000 8,500 2 4 ,000 7,000	1940 1941	Aug. 14, 1940 Sept.12, 1940 Dec. 24, 1940	12.06 6.0 7.10	38,200 4,040 7,170
	Aug. 22, 1921	8.1	16,000		Dec. 31, 1940 Feb. 7, 1941	10.06 6.07	23,300 4,160
1922	Aug. 22, 1922	4.25 6.9	2,800		Mar. 15, 1941 July 23, 1941 Aug. 9, 1941	8.85 7.77 6.82	11,600 6,270 4,4 50
1323	July 14, 1923 July 23, 1923 Aug. 11, 1923	6.2 6.4	8,500 9,700		Aug. 17, 1941 Sept.28, 1941	6.70 7.09	4,170 5,410
	Aug. 13, 1923 Aug. 16, 1923 Sept.12, 1923	6.6 6.35 5.5	10,500 9,500 6,450	1942	Aug. 9, 1942	6.35	3,300
1924	Dec. 29, 1923	6.9	11,700	1943	Jan. 23, 1943 Mar. 5, 1943 Aug. 10, 1943	7.26 6.64	5,960 4,040
1925	Aug. 6, 1925 Aug. 30, 1925	5.50 5.4	6, 42 0 6,100		Sept.26, 1943	7.0 7.30	5,300 6,290
	Sept. 4, 1925 Sept.18, 1925	6.9 5.77	11,200 7,250	1944	Aug. 9, 1944 Sept.25, 1944	10.95 6.8	28,000 4,71 0
1926	Apr. 7, 1926 Sept.28, 1926	5.95 16.2	8,000 82,000	1945	Aug. 10, 1945	9.10	9,200
1927	Feb. 18, 1927 Sept.12, 1927	6.15 5.76	8,570 6,870	1946	Aug. 5, 1946 Aug. 21, 1946 Sept.19, 1946	7.92 6.87 7.35	6,440 4,320 5,300
1928	Aug. 2, 1928 Aug. 28, 1928	7.05 6.25	12,000 8,6 4 0	1947	Aug. 8, 1947 Sept. 8, 1947 Sept.20, 1947	8.67 6.98 7.05	10,000 4,730 4,860
1929	July 30, 1929 Aug. 1, 1929	5.68 6.00	6,500 7,330	1 94 8	Aug. 3, 1948	7.70	5,850
	Aug. 8, 1929 Sept.24, 1929	5.32 7.22	5,120 11,600	1949	July 31, 1949 Aug. 8, 1949	6.81 7.07	4,740 5,230
1930 a Anr	Mar. 18, 1930 nual peak only.	4.90 b Est	4,020 imated.		Sept.13, 1949	6.68	4,500

Peak stages and discharges of Gila River at Kelvin, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Sept.15, 1949	7.12	5,610	1955	Aug. 22, 1955 Aug. 24, 1955	9.64 7.8	9,360 5,160
1950	July 21, 1950 July 30, 1950	6.88 7.91	4,330 6,920	1956	Aug. 17, 1956	5.75	1,800
1951	Aug. 3, 1951	9.99	13,200	1957	Aug. 19, 1957	7.12	4,540
1952	Jan. 14, 1952	7.57	5,430	1958	Aug. 6, 1958 Aug. 17, 1958	8.40 8.13	5,310 4, 600
1953	July 7, 1953 July 30, 1953	7.1 6.7	4,210 4,140	1959	July 28, 1959 Aug. 17, 1959	8.47 8.30	5,080 5,930
1954	Mar. 23, 1954	9.40	6,930		_		•
	July 21, 1954 Aug. 2, 1954 Aug. 4, 1954	10.07 10.49 11.80	8,460 9,430 13,300	1960	Oct. 30, 1959 Dec. 26, 1959 Jan. 12, 1960	8.73 11.00 8.86	6,150 11,200 4,800
	Aug. 5, 1954 Aug. 16, 1954	13.07 8.08	17,800 4,310		Sept. 9, 1960	11.22	11,100
1955	July 23, 1955	8.03	5,070	1961	July 22, 1961 Aug. 2, 1961	9.82 9.82	9,600 9,100
	July 25, 1955 Aug. 8, 1955	8.30 9.83	5,590 9,860		Aug. 23, 1961 Sept. 8, 1961	9.62 7.78	6,450 4,520
	Aug. 10, 1955 Aug. 13, 1955	7.7 8.53	4,970 6,660		Sept.14, 1961	7.58	4,380
	Aug. 20, 1955	8.50	6,590	1962	Dec. 16, 1961	8.56	4,910

4785. Queen Creek at Whitlow damsite, near Superior, Ariz. (Published as "near Superior" 1915-20)

Location.--Lat 33°17'55", long lll°16'25", in $NW_{4}^{1}SE_{4}^{1}$ sec.36, T.1 S., R.10 E., at WhitTow damsite, $2\frac{1}{2}$ miles upstream from Whitlow Canyon, 4 miles northeast of Florence Junction, and 10 miles west of Superior.

Drainage area. -- 144 sq mi.

Gage.--Nonrecording at site 1 mile downstream at different datum Feb. 14, 1915, to Sept. 30, 1920; recording since May 1, 1948. At site 300 ft upstream at datum 3.26 ft higher May 1, 1948, to Aug. 19, 1954. Datum of gage is 2,045.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1949.

Stage-discharge relation.--1917-20: Poorly defined by current-meter measurements below 90 cfs and extended on basis of slope-area measurement at 600 cfs.

1948-62: Defined by current-meter measurements below 2,000 cfs and extended above on basis of slope-area measurement at 42,900 cfs.

 $\frac{\text{Remarks.--Peak discharges not affected by small diversions above gage. Pase}{\text{for partial-duration series, } 500 \text{ cfs.}} \quad \text{Only annual peaks are shown prior to } 1948.$

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1917 1918 1919	May 20, 1917 Aug. 5, 1918 Aug. 1, 1919	6.0 8.0 11.0	2,800 5,000 10,000	1951	Aug. 3, 1951 Aug. 26, 1951	4.41 5.30	646 1,320
1920	Feb. 20, 1920	4.5	750	1952	Dec. 31, 1951 Jan. 13, 1952	4.85 4.20	1,130 640
1939	Aug. 6, 1939	-	13,200		Jan. 18, 1952 Mar. 17, 1952	5.12 4.65	1,170 624
1948	July 21, 1948	4.46	676	1953	Feb. 28, 1953	4.64	632
1949	Dec. 27, 1948 July 20, 1949 July 22, 1949	4.28 4.75 6.60	56s 670 2,630		Mar. 2, 1953 July 29, 1953	5.10 5.86	1,020 1,780
	July 23, 1949 Aug. 6, 1949 Aug. 8, 1949	4.70 4.65 5.72	805 805 1,710	1954	Mar. 22, 1954 Aug. 5, 1954 Aug. 19, 1954	7.85 9.10 18.0	4,260 6,260 42,900
1950	July 18, 1950 July 22, 1950	S.40 6.65	5,100 2,690	1955	Aug. 22, 1954 June 12, 1955	6.34	1,300 3,070
	Aug. 5, 1950	5.80	1,790	1355	June 13, 1955 July 23, 1955	5.38 4.69	1,860 1,180
1951	Jan. 30, 1951 July 27, 1951 Aug. 3, 1951	4.70 4.59 5.51	840 664 1,510		July 25, 1955 Aug. 3, 1955 Aug. 9, 1955	6.56 7.66 5.19	3,450 5,430 1,190

Peak stages and discharges of Queen Creek at Whitlow damsite, near Superior, Ariz.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	Aug. 13, 1955	5.23	1,240	1958	Oct. 31, 1957 Feb. 4, 1958	5.74 5.30	2,280 1,240
1956	July 25, 1956 Aug. 17, 1956	5.55 6.83	1,400 4,100		Mar. 7, 1958 Mar. 22, 1958 Apr. 16, 1958	4.74 7.00 5.95	3,970 1,000
1957	July 26, 1957 Aug. 12, 1957	6.40 5.83	2,580 2,070		Sept.13, 1958	5.50	650
	Aug. 15, 1957 Aug. 19, 1957	5.96 8.85	2,200 8,260	1959	Oct. 6, 1958 Aug. 17, 1959	4.70	480 a30,000

a About.

4795. Gila River near Laveen, Ariz.

Location.--Lat 33°15'25", long 112°09'59", in SW1NW1 sec.16, T.2 S., R.2 E., in Gila River Indian Reservation, at highway bridge 2.6 miles south of Komatke and 7.3 miles south of Laveen.

Drainage area. -- 20,615 sq mi, of which 7,729 sq mi is below Coolidge Dam.

Gage. --Recording above concrete diversion dam on main channel. Auxiliary recording or nonrecording gage on overflow channel at highway bridge a quarter of a mile south since Oct. 16, 1940. Datum of base gage is 1,018.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1949. Datum of auxiliary gage is 0.23 ft lower.

Stage-discharge relation.--Defined by current-meter measurements. Relation is complex, owing to operational procedures at the dam and is subject to large shifts during flood periods.

Remarks.--Peak discharges represent runoff from drainage area below Coolidge
Dam and may be slightly affected by irrigation diversions. Base for
partial-duration series, 700 cfs.

Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1940	Aug. 17, 1940	9,21	8,740	1949	Sept.17, 1949	6.68	1,210		
1941	Nov. 20, 1940 Dec. 26, 1940 Jan. 2, 1941 Jan. 13, 1941 Jan. 30, 1941 Feb. 9, 1941	5.75 5.49 9.33 5.08 5.72 6.19	1,610 1,440 11,900 1,040 1,720 1,830	1950	July 9, 1950 July 19, 1950 July 23, 1950 Aug. 2, 1950 Aug. 6, 1950	5.72 6.08 6.80 7.22 7.02	706 777 1,040 1,500 1,160		
	Feb. 26, 1941 Mar. 17, 1941 July 24, 1941	5.21 7.80 5.00	1,600 4,710 1,420	1951	Aug. 5, 1951 Aug. 29, 1951	6.93 7.29	1,100 1,210		
	Aug. 11, 1941 Aug. 18, 1941 Sept.19, 1941	5.42 5.43 5.14	1,730 1,750 1,560	1952	Jan. 15, 1952 Jan. 20, 1952	6.70 7.03	871 1,070		
	Sept.29, 1941	5.62	1,800	1953	July 31, 1953	6.76	565		
1942	Dec. 12, 1941	4.90	1,170	1954	Mar. 26, 1954 July 23, 1954	6.81 7.64	774 1,440		
1943	Jan. 25, 1943 Mar. 6, 1943 Aug. 4, 1943 Aug. 11, 1943 Aug. 15, 1943 Sept.27, 1943	4.68 5.13 4.70 5.41 4.70 5.78	714 1,550 702 1,470 730 1,570		Aug. 4, 1954 Aug. 8, 1954 Aug. 15, 1954 Aug. 17, 1954 Aug. 21, 1954 Sept.26, 1954	7.98 9.18 7.75 7.93 7.87 7.33	1,990 4,510 1,300 1,580 1,520 764		
1944	Aug. 11, 1944	5.83	1,330	1955	July 27, 1955 Aug. 1, 1955	8.14 8.08	2,100 1,900		
1945	Aug. 13, 1945	7.42	2,800		Aug. 5, 1955 Aug. 10, 1955	7.90 8.54	1,630 2,700		
1946	Oct. 6, 1945 Aug. 6, 1946 Sept.20, 1946	5.63 5.76 6.26	1,250 1,180 1,260		Aug. 17, 1955 Aug. 24, 1955	7.66 8.76	1,060 3,230		
1948	July 26, 1948	5.70	1,280	1956	Jan. 31, 1956	4.00	46		
1020	Aug. 5, 1948	6.09	1,430	1957	Aug. 20, 1957	6.0	446		
1949	July 25, 1949 Aug. 1, 1949 Aug. 10, 1949	6.22 5.90 6.64	880 755 1,250	1958	Aug. 9, 1958 Aug. 19, 1958	7.73 7.75	983 995		
	Sept.14, 1949	5.96	776	1959	Aug. 19, 1959	7.54	934		

Peak stages and discharges of Gila River near Laveen, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1960	Nov. 1, 1959 Dec. 28, 1959	7.70 8.12	1,080 1,680	1961	Aug. 25, 1961	7.19	655
	Jan. 14, 1960	8.18	1,760	1962	Dec. 18, 1961	7.75	1,020

4800. Santa Cruz River near Lochiel, Ariz.

Location. --Lat 31°21'20", long 110°35'25", in SW\(\frac{1}{4}\) sec.11, T.24 W., R.17 E. (unsurveyed), at bridge on county road on southern border of Spanish land grant of San Rafael, 1\(\frac{1}{2}\) miles upstream from international boundary, and 2\(\frac{1}{2}\) miles northeast of Lochiel.

Drainage area .-- 82.2 sq mi.

Gage. -- Recording. Altitude of gage is 4,620 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 1,400 cfs and extended above on basis of slope-area measurement at gage height 6,75 ft.

Remarks.--Peak discharges unaffected by small irrigation diversions. Base for partial-duration series, 1,000 cfs.

Peak stages and discharges

	,		1	T			
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	Aug. 8, 1949 Sept.13, 1949	5.70 5.75	1,600 1,650	1955	Aug. 3, 1955 Aug. 6, 1955 Aug. 9, 1955	6.54 8.30 4.90	2,860 4,300 1,520
1950	July 8, 1950 July 20, 1950 July 22, 1950 July 30, 1950 Aug. 5, 1950	6.65 5.43 6.38 6.75 6.74	4,300 2,240 3,790 4,520 4,490		Aug. 19, 1955 Aug. 20, 1955 Aug. 23, 1955 Aug. 24, 1955 Aug. 27, 1955	7.70 7.80 4.45 4.95 4.23	3,950 4,020 1,180 1,560 1,020
1951	Aug. 2, 1951	5.65	2,560	1956	July 17, 1956	4.70	1,360
1952	Aug. 16, 1952	3.71	550	1957	Aug. 9, 1957	3.71	688
1953	July 7, 1953 July 13, 1953	4,80 5.20	1,730 2,180	1958	Aug. 7, 1958	4.89	380
	July 14, 1953 July 15, 1953 July 30, 1953	6.05 4.57 4.55	3,320 1,500 1,480	1959 1960	Aug. 14, 1959 July 30, 1960	4.40 4.98	2 43 625
1954	July 20, 1954 July 22, 1954	4.69 4.69	1,510 1,570	1961	Aug. 8, 1961	5.65	1,120
	July 31, 1954	4.60	1,560	1962	July 29, 1962	2.21	7.6
1955	July 22, 1955	5.26	2,240				

4805. Santa Cruz River near Nogales, Ariz.

Location. --Lat 31°20'40", long 110°51'05", in NW $_{\overline{u}}^{1}$ sec.18, T.24 S., R.15 E. (unsurveyed), in Spanish land grant of Maria Santisima del Carmen, three-quarters of a mile downstream from international boundary, $5_{\overline{u}}^{1}$ miles unstream from Yerba Buena damsite, and $5_{\overline{z}}^{2}$ miles east of Nogales.

Drainage area. -- 532 sq mi (includes 348 sq mi in Mexico).

 $\frac{\text{Gage.--Recording.}}{1929} \text{ (levels by International Boundary and Water Commission).}$

Stage-discharge relation.--Defined by current-meter measurements below 2,300 cfs and extended above on basis of slope-area measurements at gage heights 9.5, 10.9, and 12.03 ft. Relation subject to extreme shifting.

Remarks.--Peak discharges unaffected by irrigation diversions. Records were obtained for period 1913-22 at Yerba Buena damsite, 5th miles downstreem, but did not adequately define peak flow periods and are not included here. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges of Santa Cruz River near Nogales, Ariz.

	Peak stages	and discr	larges of San	ta Cruz	KIVEL HEAL NOGAL	CD, ALLE.	
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Aug. 7, 1930	8.55	a5,400	1947	Aug. 29, 1947	7.05	2,550
1931	July 30, 1931 Aug. 4, 1931 Aug. 6, 1931 Aug. 9, 1931 Sept.14, 1931	6.75 7.45 6.8 6.52 6.1	2,900 4,150 3,000 2,600 2,050	1948	Aug. 1, 1948 Aug. 6, 1948 Aug. 11, 1948 Aug. 15, 1948	7.9 7.5 7.35 7.95	3,410 3,010 2,730 2,930
1932	Jan. 14, 1932 July 8, 1932 July 29, 1932 Aug. 9, 1932 Aug. 26, 1932	7.0 9.5 6.7 7.9 5.82	3,500 6,400 3,100 4,500 2,270	1949	July 3, 1949 July 17, 1949 July 20, 1949 July 29, 1949 Aug. 8, 1949 Sept.14, 1949	7.6 7.1 9.9 7.8 7.7 10.5	2,750 2,300 5,350 3,310 2,840 6,350
1933	Sept.19, 1933	5.5	1,900	1950	July 7, 1950	6.95 10.32	2,210 5,890
1934	August 1934	9.0	a5,900		July 20, 1950	11.16	7,210
1935	July 31, 1935 Aug. 12, 1935	6.0 6.2	2,740 3,000	1051	July 17, 1950 July 20, 1950 July 22, 1950 July 31, 1950	9.36 8.90	4,670 4,060 2,840
	Aug. 23, 1935 Aug. 23, 1935 Aug. 28, 1935	6.05 8.25 5.65	2,800 5,000 2,310	1951	July 28, 1951 Aug. 3, 1951	7.85 7.95	3,040
	Aug. 31, 1935	12.3	12,000	1952	July 29, 1952 Aug. 16, 1952	7.02 7.00	2,330 2,000
1936	June 26, 1936 July 25, 1936	6.51 6.70	3,200 3,400	1953	July 14, 1953	8.25	3,500
	July 25, 1936 Aug. 4, 1936 Aug. 9, 1936	5.95 7.34	2,600 4,050	1954	July 9, 1954 July 10, 1954	7.00 13.27	10,600
1937	Aug. 16, 1937 Aug. 22, 1937 Aug. 28, 1937	6.80 7.10 6.90	2,400 2,300 2,100		July 12, 1954 July 23, 1954 July 24, 1954 July 31, 1954	7.67 7.19 9.70 12.80	2,860 2,320 5,380 9,840
1938	July 28, 1938	7.45	2,200		Aug. 5, 1954 Aug. 23, 1954	7.26 8.74	2,400
1939	July 18, 1939 July 21, 1939 Aug. 2, 1939 Aug. 6, 1939 Aug. 13, 1939 Aug. 28, 1939	7.05 7.95 7.5 8.67 10.3 7.5	2,020 3,020 2,490 4,030 7,010 2,490	1955	July 17, 1955 July 21, 1955 July 22, 1955 Aug. 4, 1955 Aug. 6, 1955 Aug. 9, 1955	7.70 7.82 7.99 10.52 12.88 6.96	
1940	Aug. 4, 1940	6.80	1,800		Aug. 13, 1955 Aug. 20, 1955	7.01 13.71	2,810 11,100
1941	July 21, 1941	7.0	1,980		Aug. 22, 1955	10.43	6,580
1942	July 8, 1942 July 14, 1942	10.9 7.4	8,200 2,400	1956	June 28, 1956	6.63	2,530
	July 24, 1942 Aug. 7, 1942	7.7 9.26 10.0	2,900 5,100 6,410	1957 1958	Aug. 18, 1957 Aug. 5, 1958	5.75 8.95	1,620 3,000
1943	Aug. 9, 1942 July 19, 1943 July 30, 1943	7.15 9.45	2,120 5,300	1000	Aug. 11, 1958 Aug. 13, 1958 Sept. 4, 1958	8.68 9.64 7.78	2,920 4,000 2,080
	Aug. 2, 1943 Aug. 13, 1943	7.3	2,270 2,720	1959	July 21, 1959 Aug. 6, 1959	7.72 8.10	2,290 2,640
1944	Aug. 15, 1944	9.15	4,700		Aug. 21, 1959	7.46	2,010
1945	July 30, 1945	8.35	3,290	1960	Jan. 11, 1960	8.02	2,760
1946	July 26, 1946 July 29, 1946 Aug. 3, 1946 Aug. 11, 1946 Aug. 19, 1946	12.03 7.55 9.75 7.75 9.65	7,200 3,110 5,440 3,300 5,320	1961 1962	Aug. 15, 1961 Dec. 15, 1961 Jan. 24, 1962 Aug. 19, 1962	6.69 7.25 7.17 7.62	1,640 2,080 2,020 2,390
1047	Sept. 9, 1946	9.30	4,910				
1947	Aug. 8, 1947	6.90	2,460	L			

a Annual peak only.

4815. Sonoita Creek near Patagonia, Ariz.

Location. --Lat 31°30'00", long 110°49'00", in $SE_{\mu}^{1}SW_{\mu}^{1}$ sec.21, T.22 S., R.15 E., at site of former railroad bridge at Circle Z Ranch, 5 miles downstream from Patagonia.

Drainage area .-- 209 sq mi.

Gage.--Recording. At site 2,700 ft downstream at datum 18.00 ft lower prior to Mar. 6, 1940. Datum of gage is 3,818.09 ft above mean sea level, datum of 1929, supplementary adjustment of 1959.

Stage-discharge relation.--Defined by current-meter measurements below 3,400 cfs and extended above on basis of slope-area measurement at gage height 13.0 ft.

Remarks.--Peak discharges not affected by small diversions for irrigation and mlning. Base for partial-duration series, 1,200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1930	Aug. 7, 1930	7,3	a2,600	1946	Oct. 8, 1945	7.08	1,470
1931	Feb. 12, 1931	6.29	1,270		July 3, 1946 Aug. 20, 1946	7.65 7.65	2,100 2,100
1331	Feb. 15, 1931	6.5	1,450		Sept.10, 1946	8.25	2,900
	July 28, 1931	6.95	1,900		Sept.30, 1946	13.0	14,000
1932	July 26, 1932	6.75	1,700	1947	July 20, 1947	7.45	1,860
1933	July 15, 1933	6.0	1,050		Aug. 12, 1947	7.60	2,360
1934	August 1934	15.2	all,000	1948	Aug. 1, 1948 Aug. 5, 1948	7.25 7 .9 2	2,020 2,880
1935					Aug. 9, 1948	6.57	1,300
1900	July 18, 1935 Aug. 1, 1935	9.1 7.25	3,900 2,160		Aug. 11, 1948 Aug. 15, 1948	7.70 9.1	2,580 4,750
	Aug. 23, 1935	9,8	4,700	i			
	Aug. 28, 1935 Aug. 31, 1935	7.25	2,160	1949	July 6, 1949	6.7	1,330
	Sept.23, 1935	9.55 8.10	4,400 3,000		July 23, 1949 Aug. 8, 1949	7.7 9.4	2,450 5,7 9 0
	1 -	0.10	,,,,,,		Sept. 9, 1949	7.20	1,580
1936	July 7, 1936	7.45	2,540		Sept.13, 1949	8.20	3,130
	July 9, 1936 July 20, 1936	6.07 6.06	1,210 1,210	1950	July 17, 1950	7.22	1,800
	Aug. 7, 1936	7.1	2,170	1500	July 20, 1950	7.10	1,740
	Aug. 9, 1936	8,36	3,600		July 22, 1950	7.13	2,520
1937	July 27, 1937	6.94	2,020		July 30, 1950 Aug. 10, 1950	9.80 6.46	7,300 1,400
	Aug. 20, 1937	6.70	1,770		nug. 10, 1300	0.40	1,400
	Sept. 6, 1937	8.70	3,600	1951	Aug. 2, 1951	8.65	5,030
1938	Sept. 9, 1938	8,2	3,400		Aug. 14, 1951 Sept. 6, 1951	6.40 6.97	1,2 9 0 2,200
1939	July 30, 1939	7.80	2,700	1952	Aug. 14, 1952	7.78	3,630
	Aug. 2, 1939 Aug. 4, 1939	7.90 6.60	2,800 1,550		Aug. 26, 1952	7.00	2,280
	Aug. 4, 1939 Aug. 8, 1939	8.45	3,300	1953	July 6, 1953	7.35	2,780
	Aug. 11, 1939	7.4	2,300		July 14, 1953	7.4	2,870
	Aug. 24, 1939 Sept. 3, 1939	6.2 7.10	1,200 2,000		July 30, 1953	7.20	2,510
1940	T-1 27 2040	7.00	2 400	1954	July 11, 1954	7.08	2,370
1940	July 17, 1940 July 24, 1940	7.28 7.12	1,480 1,340		July 20, 1954 July 29, 1954	8.40 6.84	4,670 1,900
	Aug. 13, 1940	8,42	2,580		July 31, 1954	7.28	3,000
1941	0 3043	0.00	0.150		Aug. 3, 1954	7.00	2,370
	Aug. 9, 1941	8.02	2,150		Aug. 7, 1954 Aug. 11, 1954	6.78 6.75	2,000 2,220
1942	Sept.12, 1942	6.7	1,000		Sept. 2, 1954	6.80	1,830
1943	July 6, 1943	7.0	1,260	1955	July 22, 1955	7.05	1,810
	July 14, 1943 July 19, 1943	7.67 7.12	1,820 1,340		July 23, 1955	6.95	1,640
	Aug. 2, 1943	7.80	2,050		July 31, 1955 Aug. 3, 1955	7.35 7.05	2,350 1,810
	Aug. 5, 1943	7.65	1,900		Aug. 6, 1955	8.20	4,010
	Aug. 28, 1943	9.95	4,530		Aug. 9, 1955	8.35	4,310
1944	Aug. 9, 1944	6,22	669	i	Aug. 12, 1955	9.60 6.85	6,920 1,460
				ĺ	Aug. 13, 1955 Aug. 19, 1955	9.10	5,870
1945	July 18, 1945	7.05 7.85	1,580		Aug. 20, 1955	8.80	5,240
	July 31, 1945 Aug. 1, 1945	7.85	2,260 1, 9 90		Aug. 27, 1955	6.72	1,250
	Aug. 4, 1945	6,91	1,450	1956	July 19, 1956	6.40	780
	Aug. 6, 1945 Aug. 10, 1945	8.70 7.25	3,140 1,810	1957	Aug. 2, 1957	8,62	4,860
	Sept. 8, 1945	6.70	1,270	1357	Aug. 4, 1957	7.00	1,720
a Ar	nual peak only.	•	•	•			

Peak stages and discharges of Sonoita Creek near Patagonia, Ariz .-- Continued

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1957	Aug. 18, 1957	6.62	1,270	1959	Aug. 21, 1959	6.90	1,830
	-	i		}	Aug. 24, 1959	7.09	2,310
1958	July 5, 1958	9.00	5,590	}			
	July 24, 1958	7.22	1,480	1960	Aug. 13, 1960	6.71	1,550
	July 29, 1958	7.07	1,310	1			
1050				1961	Oct. 9, 1960	7.20	2,760
1959	July 21, 1959	6.93	1,200	1000	5 15 1007	0.05	000
	July 27, 1959	6.85	1,470	1962	Dec. 15, 1961	6.25	680
	Aug. 17, 1959	7.33	2,210				

4820. Santa Cruz River at Continental, Ariz.

Location.--Lat 31°51'10", long 110°58'40", in $NE_u^1NE_u^1$ sec.23, T.18 S., R.13 E. (unsurveyed), in Spanish land grant of San Ignacio de la Canoa, on downstream side of highway bridge at Continental.

Drainage area. -- 1,662 sq mi (includes 395 sq mi in Mexico).

Gage. -- Recording. Datum of gage is 2,836.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1958.

Stage-discharge relation.--Defined by current-meter measurements below 5,200 cfs and extended above on basis of float-area measurements at gage heights 7.90 and 8.85 ft.

 $\underline{\underline{\text{Remarks.--Peak}}}$ discharge unaffected by irrigation diversions. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1940	Aug. 14, 1940	8,85	12,100	1954	July 16, 1954 July 20, 1954	5.00 7.90	2,400 8,900		
1941	July 23, 1941 Aug. 9, 1941	5.18 5.4	3,190 3,670		July 22, 1954 July 23, 1954 July 25, 1954	5.10 7.80 4.90	2,540 8,300 2,260		
1942	July 28, 1942 Aug. 9, 1942	4.95 4.70	2,700 2,200	ŀ	July 30, 1954 July 31, 1954 Aug. 3, 1954	4.85 6.40 5.60	2,190 4,800 3,320		
1943	Aug. 1, 1943 Aug. 4, 1943 Aug. 23, 1943 Aug. 25, 1943 Aug. 28, 1943	5.55 4.99 5.14 4.60 5.07	4,000 2,810 3,120 2,010 3,020		Aug. 5, 1954 Aug. 12, 1954 Aug. 24, 1954 Sept.24, 1954	10.10 5.30 4.18 6.00	14,600 4,320 2,320 5,610		
1944	Aug. 8, 1944 Aug. 12, 1944 Aug. 16, 1944	5.55 5.80 5.30	3,860 4,440 3,200	1955	July 22, 1955 July 31, 1955 Aug. 2, 1955 Aug. 3, 1955 Aug. 6, 1955	4.53 4.10 4.43 5.68 6.57	2,990 2,300 2,800 4,000 5,990		
1945	Oct. 27, 1944 July 4, 1945 July 28, 1945 July 29, 1945 July 31, 1945 Aug. 1, 1945 Aug. 5, 1945	4.91 4.80 6.40 5.41 5.13 5.90 5.42	2,510 2,390 5,910 3,670 3,120 4,770 3,670		Aug. 6, 1955 Aug. 9, 1955 Aug. 12, 1955 Aug. 14, 1955 Aug. 19, 1955 Aug. 21, 1955 Aug. 23, 1955	4.25 4.00 4.63 11.34 5.52 4.68	2,700 2,320 3,150 17,500 4,590 4,110		
	Aug. 5, 1945 Aug. 7, 1945 Aug. 9, 1945 Aug. 20, 1945	4.85 7.25 5.82	2,500 7,820 4,550	1956	July 13, 1956 July 29, 1956	3.24 4.0	2,010 3,090		
	Sept. 8, 1949	4.90	2,600	1957	Aug. 21, 1957	3.62	1,690		
1946	Oct. 8, 1945 July 18, 1946 July 27, 1946 Aug. 2, 1946 Aug. 4, 1946 Aug. 20, 1946 Sept. 9, 1946 Sept. 27, 1946	5.50 5.48 6.00 5.78 5.40 5.30 5.94 5.17	3,670 2,800 3,860 3,490 2,590 2,390 4,120 2,150	1958	July 16, 1958 July 29, 1958 Aug. 5, 1958 Aug. 7, 1958 Aug. 7, 1958 Aug. 12, 1958 Aug. 13, 1958 Aug. 13, 1958	5.20 5.18 5.83 4.22 5.75 3.97 4.30 4.35	2,870 2,990 5,620 2,490 5,100 2,080 2,810 2,660		
1947	Oct. 1, 1946	6.40	5,330		Aug. 14, 1958 Aug. 23, 1958	4.60 4.28	2,870 2,200		
1952	Aug. 15, 1952	4.20	1,820	1959	Aug. 13, 1959 Aug. 17, 1959	4.51 5.43	2,280 3,900		
1953	July 14, 1953 July 15, 1953 July 16, 1953	6.15 5.0 6.20	4,910 2,920 4,910	1960	Jan. 12, 1960 Aug. 14, 1960	5.70 4.30	3,740 2,250		

Peak stages and discharges of Santa Cruz River at Continental, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water	Date	Gage height (feet)	Discharge (cfs)
1960	Sept.10, 1960	4.72	2,580	1961	Sept.11, 1961 Sept.16, 1961	5.30 4.78	3,190 2,100
1961	Oct. 8, 1960 July 23, 1961 Aug. 23, 1961	4.88 4.64 5.80	2,890 2,520 4,820	1962	Jan. 25, 1962	4.80	2,480

4825. Santa Cruz River at Tucson, Ariz.

Location.--Lat 32°13'15", long 110°58'50", in $NE_4^1NE_4^1$ sec.14, T.14 S., F.13 E., at Congress Street Bridge in Tucson.

Gage. -- Nonrecording October 1905 to Nov. 27, 1929, at same site at various datums; recording thereafter. At datum 4.00 ft higher Nov. 27, 1929, to June 18, 1958. Datum of gage is 2,322.90 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and extended above on basis of slope-area measurement at gage height 15.60 ft. Relation subject to large shifts.

Bankfull stage .-- 15 ft.

Historical data.--Flood of Dec. 23, 1914, was reported to be the greatest since 1905 (from University of Arizona Technical Bulletin No. 95 and earlier publications).

Remarks. -- Peak discharges unaffected by various small diversions. Records prior to December 1925 furnished by University of Arizona, Agricultural Engineering Department. Flood data not available for period prior to water year 1915. Base for partial-duration series, 1,700 cfs. Only annual peaks are shown prior to 1930.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Dec. 23, 1914	-	15,000	1934	Aug. 23, 1934 Aug. 27, 1934	10.07 8.21	6,000 2,250
1916 1917 1918 1919 1920	Jan. 20, 1916 Sept. 8, 1917 Aug. 7, 1918 Aug. 2, 1919 Aug. 9, 1920		5,000 7,500 4,900 4,700 1,950	1935	July 17, 1935 July 18, 1935 Aug. 24, 1935 Sept. 1, 1935	7.76 7.90 9.42 12.25	1,730 1,900 4,130 10,300
1921 1922	Aug. 1, 1921 July 20, 1922	-	4,000 2,000	1936	July 26, 1936 Aug. 8, 1936	10.00 8.00	5,400 1,740
1923 1924 1925	Aug. 17, 1923 Nov. 17, 1923 Sept.18, 1925	7.5	1,900 2,050 3,400	1937	July 10, 1937 Aug. 20, 1937 Aug. 24, 1937	9.10 7.75 8.08	3,280 1,900 1,920
1926 1927 1928 1929	Sept.28, 1926 Sept. 7, 1927 Aug. 1, 1928 Sept.24, 1929	19.5 15.5 14.6 19.2	11,400 1,950 1,600 10,400	1938	July 25, 1938 Aug. 5, 1938 Aug. 13, 1938	7.98 11.70 8.95	1,920 9,000 3,080
1930 1931	Aug. 7, 1930 Feb. 16, 1931 July 30, 1931 Aug. 6, 1931 Aug. 10, 1931 Aug. 21, 1931	8.00 7.67 8.92 7.92 11.3 8.87	1,770 2,060 3,480 2,170 9,200 2,840	1939	July 4, 1939 Aug. 3, 1939 Aug. 5, 1939 Aug. 7, 1939 Aug. 14, 1939 Aug. 29, 1939	7.9 12.32 10.72 11.5 9.83 9.92	1,800 8,000 5,300 6,650 3,560 3,730
1932	July 9, 1932 July 30, 1932 Aug. 9, 1932	9.26 9.27 8.70	4,160 4,200 3,070	1940 1941	July 17, 1940 Aug. 14, 1940 July 23, 1941	13.05 7.68	11,300
1933	July 24, 1933 Aug. 21, 1933	8.66 10.1	3,000 6,100	1040	Aug. 5, 1941 Aug. 14, 1941	7.76 8.48	1,840 2,490 1,670
	Sept.10, 1933 Sept.17, 1933	8.84 9.35	3,330 4,340	1942 1943	Aug. 9, 1942 Aug. 2, 1943	7.19 9.85	4,510
1934	Aug. 3, 1934	8.02	1,960	1943	Aug. 15, 1943	7.45	1,800

Peak stages and discharges of Santa Cruz River at Tucson, Ariz. -- Continued

	Teak brages and	arpenar Be	b of barron o	102 11210	at rucbon, Arr		
Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Sept.24, 1943	7.55	1,900	1954	July 22, 1954	4.08	2,040
1944	Aug. 8, 1944 Aug. 14, 1944 Aug. 16, 1944 Sept.15, 1944	7.28 7.66 10.40 8.10	2,100 2,450 6,530 3,070		July 24, 1954 July 25, 1954 Aug. 1, 1954 Aug. 3, 1954 Aug. 5, 1954	8.50 5.25 5.60 5.88 7.50	9,570 3,270 2,530 3,030 7,770
1945	July 28, 1945 July 30, 1945	8.30 9.60	3,740 5,360	1055	Aug. 12, 1954 Sept.24, 1954	6.33 5.54	5,190 4,010
	Aug. 2, 1945 Aug. 10, 1945 Aug. 21, 1945	7.60 12.70 7.60	2,450 10,800 2,270	1955	July 17, 1955 July 22, 1955 July 23, 1955 July 31, 1955	4.69 6.46 7.72 4.06	3,090 5,590 7,610 2,460
1946	July 18, 1946 July 28, 1946 Aug. 4, 1946 Aug. 20, 1946 Aug. 31, 1946 Sept.10, 1946 Sept.27, 1946	6.15 5.90 8.05 6.28 7.15 6.75 6.02	2,120 1,890 4,260 2,230 3,180 2,530 1,790		Aug. 3, 1955 Aug. 7, 1955 Aug. 10, 1955 Aug. 14, 1955 Aug. 17, 1955 Aug. 19, 1955 Aug. 21, 1955 Aug. 23, 1955	9.58 7.53 5.70 3.82 5.19 6.42 5.81 5.17	10,900 7,290 4,460 2,180 3,750 5,530 4,920 3,720
1947	Oct. 1, 1946	7.20	2,960	1956	July 13, 1956	3.35	1,730
1948	Aug. 8, 1948 Aug. 16, 1948 Sept.27, 1948	6.05 6.9 5.15	2,820 3,860 1,940	1957	July 29, 1956	3.90 4.90	2,610 3,050
	Sept.27, 1340	3.13	-	1957	Aug. 31, 1957	4.90	3,050
1949	July 23, 1949 Aug. 5, 1949 Aug. 8, 1949 Sept.10, 1949 Sept.14, 1949 Sept.15, 1949	5.05 5.60 6.63 5.00 5.25 5.55	2,010 2,670 3,800 1,960 2,210 2,540	1958	July 3, 1958 July 16, 1958 July 29, 1958 July 29, 1958 July 30, 1958 Aug. 5, 1958 Aug. 6, 1958	7.37 6.78 9.85 7.92 6.61 8.85 6.67	2,710 2,250 6,350 3,600 2,090 4,240 1,970
1950	July 8, 1950 July 18, 1950 July 22, 1950 July 30, 1950 Aug. 11, 1950 Aug. 12, 1950	5.15 6.30 8.10 8.8 6.0 5.0	1,800 4,570 7,990 9,490 3,770 2,340		Aug. 8, 1958 Aug. 13, 1958 Aug. 14, 1958 Aug. 15, 1958 Aug. 23, 1958	8.65 6.97 7.99 7.29 7.14	4,210 2,140 3,390 2,550 2,450
1951	July 16, 1951 July 27, 1951 Aug. 2, 1951	5.20 4.70 6.51	2,300 1,900 5,020	1959	July 19, 1959 Aug. 14, 1959 Aug. 17, 1959 Aug. 18, 1959 Aug. 20, 1959	8.09 6.91 8.36 6.99 9.15	2,570 1,760 3,370 1,980 4,420
1952	Aug. 12, 1952 Aug. 16, 1952 Sept.20, 1952 Sept.21, 1952	3.90 5.10 4.22 4.17	1,780 3,820 2,260 2,180	1960	Jan. 12, 1960 Aug. 9, 1960 Aug. 10, 1960 Sept.10, 1960	8.02 7.03 10.24 6.30	3,220 2,330 6,140 1,780
1953	July 15, 1953 July 16, 1953 July 39, 1953	6.80 5.7 4.25	5,900 3,950 2,000	1961	Oct. 9, 1960 July 22, 1961 Aug. 17, 1961	7.93 8.74 7.16	2,980 4,780 3,130
1954	June 25, 1954 June 26, 1954	4.52 4.91	2,240 2,740		Aug. 23, 1961	15,60	16,600
	July 11, 1954 July 16, 1954 July 20, 1954	4.06 7.41 7.21	1,910 6,940 6,730	1962	Jan. 25, 1962 Sept.26, 1962	4.64 7.90	1,820 4,9 80

4830. Tucson Arroyo at Vine Avenue, Tucson, Ariz.

Location. --Lat 32°13'00", long l10°57'00", in $SW_{\overline{u}}^{1}NE_{\overline{u}}^{1}$ sec.18, T.14 S., R.14 E., at VIne Avenue in Tucson, a quarter of a mile downstream from Arroyo Crico and $2\frac{1}{2}$ miles upstream from mouth.

Drainage area. --Original area prior to August 1945, 27.0 sq mi; subsequently reduced to following areas by flood-control diversion structures: August 1945 to June 1953, 23.4 sq mi; June 1953 to June 1954, 18.1 sq mi; June 1954 to June 1956, 15.9 sq mi; since June 1956, 8.2 sq mi. The contributing area above an overflow spillway on main intercreptor canal is not included in the latter area. See Remarks.

Gage.--Recording. Datum of gage is 2,411.9 ft above mean sea level (city of Tucson bench mark).

<u>Stage-discharge relation</u>.--Defined by current-meter measurements below 2,100 cfs and extended above on basis of slope-area measurements at gage heights 10.13 and 10.62 ft.

Remarks.--A flood-control project diverted runoff from 15.2 sq mi at upper end of basin into a flood-control detention reservoir in SEL sec.29, T.14 S., R.14 E., from which reservoir water is released to Julian Wash, which enters Santa Cruz River upstream from Tucson Arroyo. An overflow spillway on main intercreptor canal in NELSWL sec.22, T.14 S., R.14 E., allows overflow to Tucson Arroyo when canal discharge exceeds about 1,000 cfs. Base for partial-duration series, 150 cfs.

√ater year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 13, 1940	9,2	a2,700	1954	Sept. 1, 1954	4.79	209
					Sept.23, 1954	5,78	517
1943	Sept.24, 1943	9,2	a2,700		Sept.24, 1954	4,79	209
1944	July 22, 1944	6,43	676	1955	July 21, 1955	4,60	167
	Aug. 9, 1944	4.47	156		July 31, 1955	7,95	1,960
1	Aug. 16, 1944	5.82	486		Aug. 10, 1955	7.23	1,370
j	Sept.15, 1944	6.39	663		Aug. 17, 1955 Aug. 22, 1955	4.66 6.55	180 922
1945	July 28, 1945	6.98	877	ļ	Aug. 22, 1000	0.00	• • • • • • • • • • • • • • • • • • • •
	Aug. 9, 1945	6.82	816	1956	Oct. 4, 1955	4.90	245
	Aug. 17, 1945	5,64	434		Jan. 29, 1956	4.58	178
- 1	Aug. 21, 1945	6.56	719	1	July 29, 1956	4.84	232
					Aug. 11, 1956	4.82	227
1946	July 17, 1946	6.45	682	l	Aug. 26, 1956	5.38	364
	Aug. 3, 1946	6.90	850	l			
Í	Aug. 5, 1946	4.95	252	1957	July 17, 1957	6.29	716
	Sept.30, 1946	5.93	519		July 27, 1957	5.50	432
1947	Nov. 24, 1946	4.42	149		Aug. 31, 1957	5.12	316
1941	NOV. 24, 1340	4.40	149	1958	Oct. 12, 1957	5.23	366
1948	July 24, 1948	9.9	4,100		Oct. 28, 1957	6.06	697
ŀ	Aug. 4, 1948	5.13	300	1	Feb. 5, 1958	4.61	199
1	Sept.18, 1948	4.64	190		July 18, 1958	4.95	284
				(July 29, 1958	6.13	730
1949	Aug. 8, 1949	5.02	198		Aug. 20, 1958	6.05	692
	Sept.13, 1949	4.87	212	1	Sept. 9, 1958	5,93	636 860
- 1	Sept.28, 1949	5.56	364		Sept.11, 1958	6.40	860
1950	July 22, 1950	5,18	312	1959	July 17, 1959	5.51	548
	July 30, 1950	7.40	1,160		July 26, 1959	7.81	1,920
- 1	Aug. 12, 1950	4.56	174	}	Aug. 17, 1959	5.76	624
	Sept. 7, 1950	5.13	300		Aug. 20, 1959	€.52	2,540
1951	Apr. 19, 1951	4.68	198	1960	Dec. 10, 1959	5.45	525
1	Aug. 2, 1951	6.43	676		Dec. 31, 1959	4.33	181
1					Aug. 20, 1960	5.67	609
1952	Oct. 30, 1951	4.98	263		Aug. 21, 1960	4.28	170
	Aug. 14, 1952	6.55	716	3003	T 1 00 1001	C 75	3 340
-	Aug. 15, 1952	8.04	1,780	1961	July 22, 1961	6.75	1,140
1953	July 12, 1953	4.60	182		Aug. 17, 1961 Aug. 22, 1961	6.68 10.35	1,0 4 0 5,000
2300	July 14, 1953	9.40	3,240		ung. cc, 1301	10.35	3,000
1	July 26, 1953	5.56	413	1962	Dec. 16, 1961	4.25	161
- 1	,,				Jan. 24, 1962	4.36	184
1954	June 24, 1954	4.58	178		July 4, 1962	4.66	220
1	July 20, 1954	7.96	1,970		Sept. 6, 1962	5.42	304
1	July 23, 1954	6.57	934		Sept.26, 1962	7.62	1,060
	Aug. 3, 1954	5.35	369				

4833. Sabino Creek near Mount Lemmon, Ariz.

Location.--Lat 32°25'20", long 110°45'05", in $SW_{4}^{1}NW_{4}^{1}$ sec.6, T.12 S., R.16 E., on left bank 250 ft downstream from Bear Wallow Creek, $1\frac{1}{2}$ miles south of Mount Lemmon Post Office, and 18 miles northeast of Tucson.

Drainage area .-- 3.19 sq mi.

Gage. -- Recording gage and concrete control. Altitude of gage is 7,250 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 50 cfs and extended above on basis of slope-area measurement at 344 cfs.

Remarks.--Small diversion for domestic use above station does not materially affect peak flow. Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951 <u>a</u> /	July 23, 1951	8.5	180	1955	Aug. 3, 1955	9.2	225
	Aug. 2, 1951	7.65	126	fl	Aug. 6, 1955	7.7	129
	Aug. 27, 1951	6.4	50	11	Aug. 17, 1955	9.0	212
					Aug. 23, 1955	11.0	329
1952	Nov. 11, 1951	6.56	59	[]			
	Dec. 31, 1951	8.0	148	1956	July 20, 195€	6.72	68
i	Jan. 13, 1952	9.8	262		-		
	Jan. 18, 1952	7.25	100	1957	Jan. 9, 1957	8.75	197
	_	ľ			Aug. 4, 1957	6.65	65
1953	July 8, 1953	8.96	210	l}	Aug. 12, 1957	6.95	83
	July 12, 1953	8.94	208	1	Aug. 17, 1957	7.20	99
	July 16, 1953	9.12	219		Aug. 17, 1957	6.95	83
	July 17, 1953	7.00	85				
	July 24, 1953	7.09	91	1958	Oct. 14, 1957	6.55	58
3054					Mar. 22, 1958	7.48	116
1954	Mar. 23, 1954	11.3	344		Aug. 19, 1958	7.33	107
	July 22, 1954	6.92	80				
J	Aug. 8, 1954	6.97	83	1959	Oct. 5, 1958	6.80	b73
į.	Aug. 12, 1954	6.75	70				
1	Sept.23, 1954	8.07	151				_

a Period May to September.

4840. Sabino Creek near Tucson, Ariz.

Location. --Lat 32°19'00", long 110°48'35", in $SE_u^{\frac{1}{4}}NE_u^{\frac{1}{4}}$ sec. 9, T.13 S., R.15 E., half a mile north of Coronado National Forest boundary, $1\frac{3}{4}$ miles upstream from Bear Canyon, and 12 miles northeast of business center of Tucson.

Drainage area. -- 35.5 sq mi.

Gage. -- Recording. Altitude of gage is 2,720 ft (from topographic map).

Stage-discharge relation. -- Defined by current-meter measurements below 3,000 cfs and extended above by logarithmic plotting. Relation subject to shifting in higher range.

Remarks. -- Peak discharges unaffected by several small dams. Base for partial-duration series, 150 cfs.

Peak stages and discharges

	rear boages and about									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)			
1932	July 15, 1932 July 26, 1932 July 30, 1932 Aug. 9, 1932 Aug. 25, 1932	5.45 5.00 4.82 3.30 3.04	706 582 530 199 158	1935 1936	Aug. 1, 1935 Aug. 24, 1935 Sept. 2, 1935 Jan. 29, 1936	3.26 3.15 3.63 4.69 3.90	184 166 252 500 318			
1933	Sept. 8, 1933 Sept.10, 1933	3.40 4.73	215 510		July 30, 1936 Aug. 9, 1936 Sept.11, 1936	3.57 3.95	254 328			
1934	Aug. 12, 1934 Sept.22, 1934	3.13 4.59	176 472	1937	Feb. 7, 1937 Feb. 16, 1937 Mar. 16, 1937	6.51 3.53 4.50	2,020 233 451			
1935	Jan. 6, 1935 Feb. 6, 1935	4.46 4.85	439 540	1938	Feb. 27, 1938	3.54	255			

b Maximum for period October 1958 to March 1959.

Peak stages and discharges of Sabino Creek near Tucson, Ariz. -- Continued

	reak stages and	i discusive	es of Sautho	creek ne	ear Tucson, Ariz	contint	iea
dater year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
.938	Mar. 3, 1938 Aug. 7, 1938 Aug. 31, 1938	7.13 3.30 3.52	3,200 220 250	1952	Nov. 11, 1951 Dec. 31, 1951 Jan. 13, 1952 Jan. 18, 1952	5.90 6.05 6.25 4.93	1,290 1,410 1,640 675
`.939	Aug. 2, 1939 Aug. 6, 1939	2.95 3.96	152 385		Mar. 18, 1952 Aug. 24, 1952	3.32 3.38	161 169
7.940	Feb. 2, 1940 Feb. 23, 1940 June 21, 1940	3,99 4,98 4,48	396 904 43 1	1953	July 16, 1953 July 24, 1953	5.31 3.19	861 157
.941	Nov. 19, 1940 Dec. 12, 1940 Dec. 17, 1940 Dec. 24, 1940 Dec. 30, 1940 Jan. 28, 1941 Feb. 7, 1941 Feb. 23, 1941 Mar. 15, 1941	4.62 4.38 3.38 5.70 7.13 3.27 3.41 3.21 4.67	483 398 187 1,180 3,180 172 192 165 525	1954	Mar. 23, 1954 July 20, 1954 July 22, 1954 Aug. 3, 1954 Aug. 5, 1954 Aug. 12, 1954 Aug. 12, 1954 Aug. 23, 1954 Sept. 23, 1954	8.43 3.47 8.15 4.00 3.28 4.12 4.28 3.90 5.39	5,110 199 4,840 330 168 360 408 295 909
1942	July 24, 1941 Sept.28, 1941 Nov. 13, 1941 Dec. 11, 1941 Feb. 28, 1942 Sept.10, 1942	4.38 3.68 4.19 3.87 4.23 4.34	516 282 398 291 414 449	1955	July 20, 1955 July 22, 1955 July 29, 1955 July 31, 1955 Aug. 2, 1955 Aug. 3, 1955 Aug. 6, 1955	3.59 4.72 3.19 3.27 5.35 6.55 5.35	228 573 156 168 885 2,000 885
1943	Mar. 5, 1943 Aug. 4, 1943 Aug. 6, 1943 Aug. 14, 1943	4.56 3.40 3.25 3.14	567 212 182 163	1 9 56	Aug. 12, 1955 Aug. 17, 1955 Aug. 23, 1955 Aug. 11, 1956	4.34 4.88 3.74 2.33	434 632 260 55
1944	July 8, 1944 Aug. 9, 1944	3.31 3.28	175 170	1957	Jan. 8, 1957 Jan. 9, 1957	3.30 6.65	181 2,030
1945	July 29, 1945 July 30, 1945 Aug. 9, 1945	4.37 5.15 3.30	484 916 1 9 2	1050	Jan. 10, 1957 Feb. 4, 1957 Aug. 18, 1957	4.03 3.74 4.83	331 266 570
1946	Sept. 8, 1945 Oct. 9, 1945 Aug. 23, 1946 Aug. 31, 1946	4.04 3.43 6.30 3.46	375 219 2,000 225	1958	Oct. 14, 1957 Oct. 28, 1957 Oct. 31, 1957 Mar. 17, 1958 Mar. 22, 1958 Apr. 9, 1958	4.89 3.62 4.08 4.64 5.85 3.45	664 191 289 535 1,500 171
1947	Dec. 26, 1946	3.47	227	1959	Oct. 5, 1958	5.05	644
1948	Aug. 6, 1948 Aug. 11, 1948	4.06 3.30	380 192		July 3, 1959 July 26, 1959 Aug. 17, 1959	5.95 7.85 4. 88	1,400 4,240 580
1949	Dec. 27, 1948 Jan. 9, 1949 Jan. 13, 1949 July 30, 1949 Aug. 8, 1949 Sept.13, 1949	5.15 3.88 4.41 3.57 5.78 4.22	916 277 461 250 1,430 430	1960	Aug. 19, 1959 Oct. 28, 1959 Oct. 30, 1959 Nov. 2, 1959 Dec. 24, 1959 Jan. 11, 1960	3.76 4.52 5.00 3.75 5.95 5.73	218 442 710 212 1,600 1,340
1950	July 7, 1950 Aug. 23, 1950	6.50 4.25	2,260 440	1961	Aug. 1, 1961 Aug. 30, 1961	3.84 5.25	232 910
1951	July 23, 1951 Aug. 2, 1951 Aug. 27, 1951	4.1 5.11 4.12	340 750 346	1962	Sept.11, 1961 Dec. 16, 1961	3.87 4.80	238
1952	Oct. 30, 1951	4.96	675		Jan. 24, 1962 Sept.26, 1962	4.53 5.44	386 1,010

4845. Rillito Creek near Wrightstown, Ariz.

Location.--Lat 32°15'55", long 110°50'25", in $NE_u^1NE_u^1$ sec.31, T.13 S., R.15 E., at hIghway bridge 1 mile downstream from Sabino Creek, 2 miles upstream from Pantano Wash, and $3\frac{1}{2}$ miles northwest of Tucson.

Drainage area. -- 221 sq mi.

Gage .-- Recording. Altitude of gage is 2,460 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements.

 $\frac{\text{Remarks.--No significant regulation or diversion above station.}}{\text{partial-duration series, 400 cfs.}}$

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Feb. 23, 1940 Aug. 13, 1940	7.8	a700 6,400	1942	Dec. 12, 1941 Feb. 28, 1942	4.09 4.12	536 639
1941	Dec. 12, 1940 Dec. 25, 1940 Dec. 30, 1940	4.25 5.33 7.85	995 2,140 9,000	1943	Mar. 5, 1943 Aug. 15, 1943	4.59 4.53	1,090 1,070
	Jan. 28, 1941 Feb. 7, 1941 Feb. 23, 1941	4.60 5.24 4.11	906 1,800 507	1944	July 22, 1944 Aug. 9, 1944	3.94 4.20	5 4 7 825
	Mar. 15, 1941 July 23, 1941	4.84 4.67	1,540 1,020	1945	July 29, 1945 Aug. 9, 1945	3.76 3.97	411 573

a Estimated.

4850. Rincon Creek near Tucson, Ariz.

Location.--Lat 32°07'50", long 110°37'30", in NE $\frac{1}{4}$ sec.17, T.15 S., R.17 E., a quarter of a mile north of Sentinel Butte, 9 miles upstream from mouth, and 20 miles southeast of Tucson.

Drainage area. -- 44.8 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 3,120 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,800 cfs and extended above on basis of slope-area measurement at 8,250 cfs.

Remarks. -- Base for partial-duration series, 100 cfs.

	reak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1953	July 30, 1953 Aug. 27, 1953	3.78 3.48	1 94 105	1957	Aug. 31, 1957	6.25	1,850		
1954	Mar. 23, 1954 July 24, 1954 Aug. 12, 1954 Aug. 19, 1954	4.75 4.55 4.60 6.50	640 525 550 2,160	1958	Mar. 22, 1958 July 29, 1958 Aug. 22, 1958 Aug. 24, 1958	5.46 5.33 5.34 5.60	492 285 294 447		
1955	July 21, 1955 July 22, 1955 July 31, 1955 Aug. 3, 1955 Aug. 6, 1955 Aug. 13, 1955 Aug. 17, 1955 Aug. 20, 1955 Aug. 24, 1955	5.35 8.50 8.00 9.90 4.88 9.46 5.54 7.98 4.50	1,000 5,050 4,070 8,250 312 7,170 682 4,030 190	1959	Oct. 21, 1958 July 3, 1959 Aug. 2, 1959 Aug. 5, 1959 Aug. 6, 1959 Aug. 13, 1959 Aug. 15, 1959 Aug. 17, 1959 Aug. 26, 1959	8.50 4.64 5.35 4.74 4.69 5.16 5.78 4.53	5,220 142 580 182 159 357 415 1,240		
1956	July 20, 1956	4.35	150	1960	Nov. 2, 1959 Jan. 12, 1960	4.32 5.69	106 7 4 7		
1957	Jan. 8, 1957 Jan. 9, 1957 Aug. 5, 1957 Aug. 16, 1957 Aug. 20, 1957 Aug. 22, 1957	4.02 7.37 6.36 5.22 5.28 6.69	148 3,570 1,990 155 185 2,440	1961 1962	Aug. 13, 1961 Aug. 22, 1961 Sept. 8, 1961 Dec. 16, 1961 Jan. 24, 1962	5.03 6.92 4.88 4.18 4.36	325 2,600 430 152 227		

1,110

4860. Rillito Creek near Tucson, Ariz.

Location.--Lat 32°17'40", long 110°59'05", in $SW_{\pi}^{1}SE_{\pi}^{1}$ sec.14, T.13 S., F.13 E., 1,100 ft downstream from Pima Canyon, 2,300 ft downstream from bridge on U.S. Highway 89, $4\frac{7}{4}$ miles upstream from mouth, and 5 miles north of Tucson.

Drainage area. -- 904 sq mi prior to July 1945; 918 sq mi thereafter.

Gage. --Nonrecording prior to July 24, 1930; recording thereafter. At site of former highway bridge 1,800 ft upstream at various datums prior to July 19, 1945. At datum 4.01 ft higher July 19, 1945, to Dec. 18, 1955. Datum of gage is 2,283.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1954.

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs, and extended above on basis of area-velocity studies. Relation subject to large shifts.

Bankfull stage .-- 10 ft, present site and datum.

1936

Jan. 30, 1936

6.71

1,130

Historical data .-- Flood of Dec. 23, 1914, was the greatest known in period

Remarks. -- Peak discharges not affected by small irrigation diversions.

prior to 1926 were furnished by University of Arizona, Agricultural Records Engineering Department, and reviewed by Geological Survey. Base for partial-duration series, 1,000 cfs. Only annual peaks are shown prior to 1930.

Peak stages and discharges Gage Gage Water Discharge Water Discharge Date height Date height year (cfs) (cfs) (feet) (feet) July 26, 1936 Aug. 9, 1936 Aug. 17, 1936 1,270 1915 Dec. 23, 1914 7.75 17,000 1936 6.97 3,210, 4,500 8.0 8.25 1916 Jan. 19, 1916 6.5 7,620 1917 Aug. 11, 1917 Mar. 1, 1918 10,000 5,300 Mar. 2,280 1918 _ 1937 Feb. 7, 1937 7.53 July 27, 1919 Feb. 21, 1920 1919 9,250 Aug. 17, 1937 7.85 2,980 7,800 1920 1938 4, 1938 Mar. 7.54 3,000 July 31, 1921 Aug. 9, 1922 Aug. 26, 1923 Dec. 26, 1923 1921 16,000 3,250 July 2, 1939 Aug. 3, 1939 Aug. 14, 1939 1922 7.0 1939 8.75 6,100 1923 4,000 1,980 9.45 9,710 6.3 1924 7.5 1925 Sept.17, 1925 3,500 7.8 2,810 1940 June 23, 1940 Sept.27, 1926 Sept.12, 1927 Aug. 1, 1928 1,750 2,200 4,500 Aug. 13, 1940 Sept.12, 1940 10.30 1926 17.7 18.2 13,200 1927 1928 Aug. 19.0 Sept.23, 1929 24 7.63 1929 24,000 1941 Dec. 25, 1940 1,300 Dec. 31, 1940 Feb. 7, 1941 9.70 9,900 1930 Mar. 17, 1930 July 9, 1930 7.74 17.0 1,920 1,540 July 9, 1930 July 13, 1930 July 20, 1930 17.0 1,310 1,030 4,540 Mar. 15, 1941 Aug. 7, 1941 Sept.18, 1941 7.67 1,320 9.15 7.38 17.0 7,040 7.4 1,640 1,670 2,910 4,600 July 22, 1930 6.35 July 25, 1930 Aug. 8, 1930 Sept. 7, 1930 6.9 7.76 1942 Sept.14, 1942 1,600 7.6 Aug. 2, 1943 Aug. 4, 1943 Aug. 15, 1943 Aug. 25, 1943 7.14 2,660 1943 7.47 1,340 7.27 1,840 8.45 7.81 1931 Feb. 16, 1931 6.6 3,850 6, 1931 8, 1931 3,110 6,120 7.16 8.17 Aug. Aug. 8, 1931 Aug. 10, 1931 Aug. 14, 1931 Aug. 20, 1931 8.45 6.35 6.9 7,200 1,090 2,080 July 23, 1944 Aug. 9, 1944 1,670 1944 7.73 8.51 4,100 Aug. 10, 1945 Aug. 22, 1945 5.95 1945 1932 Nov. 22, 1931 7.10 2,550 3.0 1,010 1,970 2,060 7,200 Feb. 10, 1932 July 8, 1932 6.86 Aug. 4, 1946 Aug. 23, 1946 Aug. 29, 1946 31, 1946 3.75 1,560 July 8, 1932 July 29, 1932 1946 6.90 3.85 2,000 8.7 1933 Oct. 12, 1932 Sept.10, 1933 7.13 2,630 5 03 4,400 7.65 Aug. 8, 1947 Aug. 12, 1947 Aug. 15, 1947 1947 8, 1947 6.10 5,740 3,000 2,820 1934 July 17, 1934 Aug. 23, 1934 7.25 4.80 3,530 7,660 9.92 7.2 2,420 1,050 2,640 4,850 1935 6, 1935 Jan. 7.4 1.948 Sept.26, 1948 2.75 Feb. 8, 1935 July 31, 1935 6.69 7.58 1,300 1,640 1949 Sept.13, 1949 Sept.15, 1949 3.00 Aug. 24, 1935 8.45 3,23 Aug. 31, 1935 10.18 13,400 1950 June 23, 1950 July 19, 1950 1,510 3.25

Peak stages and discharges of Rillito Creek near Tucson, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	July 21, 1950 July 23, 1950	3.85 4.85	1,710 3,480	1956	July 29, 1956	6.30	2,050
	July 30, 1950	6.90	9,490	1957	Jan. 9, 1957	7.14	4,500
1951	July 25, 1951 Aug. 2, 1951 Aug. 13, 1951	6.93 4.55 3.40	9,500 4,200 2,280	1958	Mar. 22, 1958 July 1, 1958 July 18, 1958 Aug. 12, 1958	6.27 5.77 7.02 9.64	1,940 1,060 3,650 8,930
1952	Nov. 11, 1951	2.97	1,630		1		-
1953	July 14, 1953 July 16, 1953	2.80 5.20	1,300 5, 4 70	1959	July 19, 1959 July 26, 1959 July 29, 1959 Aug. 17, 1959	5.80 6.78 5.18 8.86	1,130 2,820 1,050 7,710
1954	Mar. 23, 1954 July 16, 1954	4.42 2.50	4,610 1.060		Aug. 20, 1959	5,47	1,980
	July 20, 1954 July 22, 1954 July 24, 1954 Sept.23, 1954 Sept.24, 1954	5.52 3.84 5.84 3.27 3.51	6,140 3,630 7,680 2,360 2,740	1960	Oct. 28, 1959 Dec. 25, 1959 Jan. 12, 1960 Aug. 9, 1960 Aug. 11, 1960	6.21 5.57 6.98 6.31 5.90	2,150 1,100 3,610 1,470 1,230
1955	July 21, 1955 July 22, 1955 July 31, 1955 Aug. 2, 1955 Aug. 2, 1955 Aug. 3, 1955	6.0 4.10 4.40 1.48 1.55 5.4	8,070 4,840 5,320 1,010 1,070 7,010	1961	July 22, 1961 July 22, 1961 Aug. 15, 1961 Aug. 22, 1961 Aug. 23, 1961	7.11 7.36 5.45 6.32 6.28	3,670 4,140 1,280 2,350 2,290
	Aug. 6, 1955 Aug. 7, 1955 Aug. 14, 1955 Aug. 20, 1955 Aug. 28, 1955	2.95 1.90 2.18 5.7 3.35	3,100 1,590 1,980 7,530 3,700	1962	Dec. 16, 1961 Jan. 25, 1962 Sept.26, 1962	5.92 5.47 6.48	1,420 1,050 2,690

4865. Santa Cruz River at Cortaro, Ariz. (Published as "at Rillito" 1940-47)

Location.--Lat 32°21'10", long ll1°05'45", in $SW_{\overline{4}}^{\frac{1}{4}}SW_{\overline{4}}^{\frac{1}{4}}$ sec.26, T.12 S., R.12 E., half a miles southwest of Cortaro, 3 miles downstream from Canada del Oro, and 4 miles downstream from Rillito Creek.

<u>Drainage area.--3,503</u> sq mi; 53 sq mi greater at site in use October 1939 to June 1947.

<u>Gage.</u>--Recording. At datum 2,053.43 ft above mean sea level, datum of 1929, and auxiliary nonrecording gage $4\frac{3}{4}$ miles downstream, prior to Mar. 13, 1941. At site $4\frac{3}{4}$ miles downstream (850 ft upstream from preceding gage) at datum 2,052.33 ft above mean sea level, datum of 1929, Mar. 14, 1941, to June 30, 1947. Datum of gage is 2,137.13 ft above mean sea level (Arizona Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs at site in use prior to July 8, 1950. Relation at present site defined by current-meter measurements below 7,700 cfs and extended above on basis of slope-area measurement at gage height 9.22 ft.

Bankfull stage .-- 10 ft, present site and datum.

Remarks.--Peak discharges not affected by municipal and irrigation diversions.

Base for partial-duration series, 2,700 cfs.

	Teak Boages and attendantes								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1940	Aug. 14, 1940	9.9	17,000	1943	Aug. 23, 1943 Sept.24, 1943	10.9 11.75	3,220 5,500		
1941	Dec. 31, 1940	8,52	7,800	ll .	Sept.26, 1943	10.48	2,710		
	Aug. 8, 1941	12.1	6,000	1)	1 -)			
	Aug. 9, 1941	10.7	2,720	1944	July 22, 1944	11.0	3,270		
	Aug. 14, 1941	11.0	2,740		Aug. 8, 1944 Aug. 16, 1944	11.35 11.60	4,890 5,650		
1942	Aug. 9, 1942	10.90	1,550		Sept.16, 1944	11.15	4,310		
1943	Aug. 2, 1943 Aug. 14, 1943	11.3 11.16	4,080 4,110	1945	July 28, 1945 July 30, 1945	11.3 11.1	4,740 4,600		
	Aug. 15, 1943	11.33	4,670		Aug. 2, 1945	10.7	3,360		

Peak stages and discharges of Santa Cruz River at Cortaro, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Aug. 10, 1945 Aug. 21, 1945	13.25 10.1	14,000 2,850	1955	July 23, 1955 July 31, 1955 Aug. 3, 1955	7.80 7.55 9.90	10,000 9,380 16,600
1946	Aug. 4, 1946 Aug. 31, 1946 Sept.10, 1946	10.85 10.6 10.34	4,440 3,600 2,790		Aug. 7, 1955 Aug. 10, 1955 Aug. 17, 1955 Aug. 19, 1955	6.30 7.20 6.20 6.10	7,530 9,530 7,320 7,110
1947	Aug. 15, 1947	11.8	7,500		Aug. 21, 1955	6.60	8,180
1950	June 22, 1950 July 19, 1950	- 5.90	a4,000 4,040		Aug. 23, 1955 Aug. 28, 1955	6.00 4.75	6,900 3,080
	July 21, 1950 July 22, 1950 July 24, 1950	6.3 7.60 6.8	5,920 8,280 6,130	1956	July 13, 1956 July 29, 1956	4.54 5.00	2,700 3,150
	July 30, 1950 Aug. 12, 1950	9.1 4.9	12,900 3,640	1957	Jan. 9, 1957 Sept. 1, 1957	4.92 5.69	2,750 4, 4 00
1951	July 17, 1951 July 25, 1951 Aug. 2, 1951	4.82 6.50 5.48	2,700 6,820 4, 560	1958	July 29, 1958 Aug. 5, 1958 Aug. 8, 1958 Aug. 12, 1958	6.78 5.63 5.06 7.03	7,290 4,450 3,320 7,890
1952	Aug. 14, 1952 Aug. 16, 1952	6.2 5.2	6,100 3,810	1959	July 21, 1959	6.08	5,960
1953	July 14, 1953 July 16, 1953	8,10 6,1	10,800 5,900		July 26, 1959 Aug. 2, 1959 Aug. 17, 1959 Aug. 20, 1959	5.34 4.55 6.73 6.70	4,620 2,800 7,820 8,000
1954	Mar. 23, 1954 July 16, 1954 July 20, 1954 July 22, 1954 July 23, 1954 July 24, 1954	5.49 6.13 7.53 4.74 7.35 7.53	5,060 6,130 8,820 2,860 8,280 9,150	1960	Oct. 28, 1959 Jan. 12, 1960 Aug. 10, 1960 Aug. 11, 1960	4.60 6.00 5.81 6.12	2,800 6,220 5,620 6,420
	July 25, 1954 Aug. 1, 1954 Aug. 5, 1954 Aug. 12, 1954 Sept.23, 1954 Sept.24, 1954	6.88 6.44 7.20 6.15 6.00 5.36	7,250 3,510 6,960 4,700 4,350 3,300	1961	Oct. 9, 1960 July 22, 1961 July 22, 1961 Aug. 17, 1961 Aug. 23, 1961 Aug. 30, 1961	4.96 5.60 5.51 5.30 9.00 4.82	4,180 3,020 2,860 3,450 14,700 4,000
1955	July 22, 1955	6 .4 5	6,700	1962	Sept.26, 1962	9.22	11,200
a Libi	, Inta oca .						

4885. Santa Rosa Wash near Vaiva Vo, near Sells, Ariz.

<u>Location</u>.--Lat 32°40'00", long lll°55'40", in $SW_{\frac{1}{4}}^{\frac{1}{4}}SW_{\frac{1}{4}}^{\frac{1}{4}}$ sec.2, T.9 S., R.4 E., in Papago Indian Reservation, on right bank $3\frac{1}{2}$ miles south of Vaiva Vo, $10\frac{1}{2}$ miles southeast of Chuichu, 12 miles downstream from Gu Komelik, and $52\frac{1}{2}$ miles north of Sells.

Drainage area. -- 1,782 sq mi.

Gage .-- Recording. Altitude of gage is 1,470 ft (from topographic map).

 $\frac{Stage\text{-}discharge \ relation.--Defined by current-meter measurements below 840 cfs}{\text{and extended above on basis of slope-area measurement at 53,100 cfs.}$

Remarks. -- Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	July 21, 1955 July 23, 1955 July 24, 1955	8.70 9.18 9.73	830 926 1,070	1958	Mar. 13, 1958 July 30, 1958	8.18 11.95	737 4,380
	Aug. 2, 1955 Aug. 4, 1955 Aug. 8, 1955 Aug. 14, 1955	8.67 9.42 10.00 9.29	824 976 1,150 948	1959	July 13, 1959 July 27, 1959 Aug. 11, 1959	11.85 8.38 11.07	4,120 746 2,540
1956	July 24, 1956	8.20	740	1960	Oct. 31, 1959 July 30, 1960	8,56 8,62	790 805
1957	Aug. 12, 1957	6.47	492	1961	July 23, 1961 July 27, 1961	8.32 8.94	7 34 892
1958	Oct. 15, 1957 Nov. 1, 1957 Feb. 6, 1958	8.75 13.2 12.0	865 10,000 4,500	1962	June 28, 1962 Sept.27, 1962	8.14 16.9	702 53,100

4890. Santa Cruz River near Laveen, Ariz.

Location. --Lat 33°13'56", long 112°10'08", in NE1 24 sec.29, T.2 S., R.2 E., in Gila River Indian Reservation, at highway bridge 3.4 miles upstream from mouth, 4.3 miles south of Komatke, and 9 miles south of Laveen.

Drainage area. -- 8,581 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 1,020.86 ft above mean sea level, datum of 1929, Phoenix-Picacho supplementary adjustment of 1949.

Stage-discharge relation.--Main channel relation defined by current-meter measurements. High-stage flow in bypass channel is estimated.

Remarks.--Peak discharges affected by spreading operations and diversions for irrigation. Base for partial-duration series, 380 cfs.

Peak stages and discharges

			Peak stages a	ina aiscn	arges		·
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Aug. 17, 1940 Sept.18, 1940	7.68 9.30	743 1,200	1951	July 28, 1951 Aug. 4, 1951 Aug. 7, 1951	9.50 13.83 15.73	502 1,510 2,810
1941	Nov. 20, 1940 Jan. 2, 1941 Mar. 2, 1941	6.87 9.08 6.12	536 1,230 384		Aug. 15, 1951 Aug. 28, 1951	9.70 17.00	527 5,060
	Mar. 6, 1941 Mar. 15, 1941 Apr. 13, 1941	7.05 10.03 8.05	548 1,580 908	1952	July 28, 1952 Aug. 15, 1952	11.57 14.38	805 1,860
	July 25, 1941 Aug. 7, 1941 Aug. 30, 1941	8.32 7.50 5.97	950 720 384	1953	Nov. 16, 1952 Nov. 18, 1952 July 17, 1953	9.54 10.46 9.05	425 538 380
1942	Dec. 11, 1941	6.11	413	1954	July 17, 1953	10.43	555
	Jan. 2, 1942 July 15, 1942 Aug. 5, 1942	5.97 11.61 7.19	384 1,890 551	1954	Aug. 9, 1954 Aug. 10, 1955	11.50 15.56	726 2,180
1943	Aug. 1, 1943 Aug. 18, 1943	6.42 7.02	390 480	1956	Jan. 30, 1956	6.64	90
	Sept.25, 1943 Sept.28, 1943	7.46 10.01	563 1,200	1957 1958	Aug. 20, 1957 Nov. 3, 1957	12.40 16.10	1,040
1944	Feb. 25, 1944	5.10	217	1958	Feb. 7, 1958 Mar. 15, 1958	14.37 10.08	3,360 1,910 382
1945	July 31, 1945 Aug. 3, 1945 Aug. 11, 1945	7.61 8.28 10.79	488 592 1,200	i	June 22, 1958 Aug. 1, 1958 Sept.12, 1958	12.30 11.99 12.51	910 797 994
1946	Oct. 5, 1945 July 18, 1946 Sept.21, 1946	6.87 9.50 16.70	390 840 5,020	1959	July 15, 1959 Aug. 2, 1959 Aug. 3, 1959	11.18 11.76 10.7	500 632 426
1948	Aug. 7, 1948	11.85	al,200		Aug. 12, 1959 Aug. 18, 1959	16.03 15.60	3,010 2,740
1949	Aug. 6, 1949 Sept.11, 1949 Sept.15, 1949	12.58 9.56 12.59	1,400 565 1,280	1960	Dec. 25, 1959 Jan. 15, 1960	10.46 11.97	393 707
	Sept.17, 1949	13.61	1,780	1961	Aug. 15, 1961	11.56	547
1950	Aug. 3, 1950 Aug. 11, 1950	8.36 10.20	428 685	1962	Sept.29, 1962	17.50	9,200

a Annual peak only.

4892. Pachete Creek at Mayerick, Ariz.

Location.--Lat 33°44'25", long 109°32'25", at corner of secs. 28, 29, 32, $\frac{1}{1}$ 33, $\frac{1}{2}$ N., R.27 E., on left bank half a mile south of Maverick.

Drainage area .-- 14.8 sq mi.

 $\frac{\text{Gage.--Recording gage and concrete control.}}{\text{barometer)}.$ Altitude of gage is 7,850 ft (by

Stage-discharge relation .-- Defined by current-meter measurements below 230 cfs.

Remarks .-- Base for partial-duration series, 25 cfs.

Peak stages and discharges of Pachete Creek at Maverick, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Apr. 22, 1958 Aug. 3, 1958 Aug. 22, 1958	4.33 3.00 2.94	312 35 30	1960	Apr. 23, 1960 May 5, 1960	2.99 2.85	4 2 27
	Sept.13, 1958	3.13	49	1961	Aug. 8, 1961	2.76	18
1959	Oct. 6, 1958 Aug. 27, 1959	3.67 3.07	140 45	1962	Feb. 16, 1962 Apr. 9, 1962 July 19, 1962	2.82 3.80 2.94	26 179 31
1960	Mar. 14, 1960 Mar. 21, 1960	3.32 3.49	81 102		July 29, 1962 Aug. 16, 1962	3.00 2.95	36 32

4895. Black River below pumping plant, near Point of Pines, Ariz.

Location.--Lat 33°28'30", long 109°46'00", in W_2^1 sec.32, T.2 N., R.25 E. (unsurveyed), in San Carlos Indian Reservation, on left bank l mile downstream from Phelps Dodge Corp. pumping plant, $l_{\frac{1}{2}}$ miles downstream from Freezeout Creek, 7 miles northwest of Point of Pines, and 63 miles upstream from confluence with White River.

Drainage area. -- 560 sq mi.

Gage .-- Recording. Altitude of gage is 5,742 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 600 cfs and extended above on basis of slope-area measurement at 5,000 cfs.

Remarks.--Water is diverted at pumping plant 1 mile upstream and pumped into headwaters of Willow Creek (tributary of Eagle Creek) for mining, metallurgical treatment of ores, and domestic supply in vicinity of Morenci. Diversion does not materially affect peak flows. Base for partial-duration series, 500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1954	Mar. 23, 1954 Apr. 9, 1954	9.35 4.90	5,000 675	1958	Mar. 17, 1958 Mar. 22, 1958 Apr. 23, 1958	5.07 8.67 8.95	1,050 4,310 4,590
1955	Aug. 4, 1955 Aug. 6, 1955	5.31 4.36	1,040 507		Sept.13, 1958	4.85	870
	Aug. 9, 1955 Aug. 13, 1955 Aug. 16, 1955 Aug. 21, 1955	4.58 4.53 4.73 5.69	615 590 697 1,310	1959	Oct. 6, 1958 July 17, 1959 Aug. 17, 1959 Aug. 18, 1959 Aug. 19, 1959	5.77 5.00 5.14 7.2 9.1	1,520 960 1,050 2,770 4,820
1956	Mar. 20, 1956 Aug. 15, 1956	4.45 4.34	6 4 2 575		Aug. 26, 1959	4.93	918
1957	Feb. 19, 1957 Aug. 11, 1957 Aug. 12, 1957 Aug. 15, 1957 Aug. 24, 1957	4.21 5.32 4.31 4.32 4.64	538 1,170 546 542 732	1960	Nov. 3, 1959 Dec. 26, 1959 Jan. 11, 1960 Mar. 14, 1960 Mar. 23, 1960	4.93 5.08 5.95 6.0 5.9	954 1,010 1,700 1,820 1,740
	Aug. 25, 1957 Aug. 26, 1957	5.31 6.42	1,170 2,060	1961	Apr. 4, 1961	3.94	495
7.050	Aug. 31, 1957	4.44	610	1962	Feb. 16, 1962 Apr. 11, 1962	5.53 7.32	1,450 2,950
1958	Feb. 26, 1958	4.26	575				

4897. Big Bonita Creek near Fort Apache, Ariz.

<u>Location</u>.--Lat 33°40'10", long 109°50'45", in NE_{4}^{1} sec.28, T.4 N., R.24 E., near right bank on downstream side of pier of highway bridge, 1_{4}^{2} miles upstream from Tonto Creek, 3_{2}^{1} miles southeast of Chino Springs, and 11_{2}^{1} miles southeast of Fort Apache.

Drainage area .-- 119 sq mi.

Gage .-- Recording. Altitude of gage is 5,910 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 820 cfs.

Remarks. -- Base for partial-duration series, 150 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Mar. 22, 1958 Apr. 22, 1958 Sept.10, 1958 Sept.13, 1958	6.15 6.08 3.78 4.22	1,120 1,000 176 297	1960	Nov. 2, 1959 Dec. 25, 1959 Mar. 14, 1960 Mar. 22, 1960 Mar. 27, 1960	4.00 4.05 4.17 4.35 4.36	254 278 302 348 356
1959	Oct. 6, 1958 Aug. 2, 1959 Aug. 15, 1959	5.75 5.23 6.20	895 682 1,200	1961	Apr. 6, 1961	2.98	83
	Aug. 17, 1959 Aug. 18, 1959 Aug. 19, 1959 Aug. 25, 1959	4.93 4.28 4.30 4.02	657 409 416 322	1962	Feb. 13, 1962 Apr. 17, 1962	3.82 4.99	280 710

4900. Turkey Creek near Fort Apache, Ariz.

Location. --Lat 33°44'15", long 109°52'10", in $NW_{\overline{4}}^{1}$ sec. 32, T.4 $\frac{1}{2}$ N., R.24 E. (unsurveyed), in Fort Apache Indian Reservation, on right bank $7\frac{1}{2}$ miles southeast of Fort Apache and $16\frac{1}{2}$ miles upstream from mouth.

Drainage area. -- 12.7 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 6,430 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 40 cfs and extended above by logarithmic plotting.

Remarks. -- Base for partial-duration series, 15 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1956	July 19, 1956	2.08	16	1960	Nov. 2, 1959 Dec. 25, 1959	2.23	24 61
1957	Mar. 24, 1957	1.88	6.8		Jan. 3, 1960 Jan. 12, 1960	2.15 2.28	20 28
1958	Mar. 22, 1958 Aug. 2, 1958	3.80 2. 4 2	307 37		Jan. 18, 1960 Mar. 8, 1960 Sept. 9, 1960	2.42 2.52 2.50	38 49 45
1959	Aug. 2, 1959	2.71	64		2-1		

4905. Black River near Fort Apache, Ariz.

Location. --Lat 33°42'45", long 110°12'40", in NW1 sec.12, T.4 N., R.20 E., on downstream side of first pler from right on highway bridge, 5 miles upstream from mouth and 14 miles west of Fort Apache.

Drainage area. -- 1,232 sq mi.

Gage.--Nonrecording or recording gages at several sites within 1 mile of present site at various datums November 1912 to July 1918; recording thereafter. Altitude of gage is 4,345 ft (from river-profile map).

Stage-discharge relation. -- Prior to 1958, defined by current-meter measurements below 1,000 cfs and extended above on basis of slope-area measurement at 18,000 cfs. Defined by current-meter measurements below 5,000 cfs at present site and extended above on basis of slope-area measurement at 12,900 cfs.

Historical data.--Greatest flood recorded 1912-18 was that of Dec. 20, 1914.
Flood of Jan. 28, 1915, is known to have exceeded that of Dec. 20, 1914, by an unknown amount.

Remarks. -- One transbasin diversion does not materially affect peak flows. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Dec. 20, 1914	15.9	al8,000	1960	Nov. 2, 1959	9.95	5,780
1958	Feb. 5, 1958 Feb. 26, 1958 Mar. 9, 1958 Mar. 14, 1958 Mar. 16, 1958 Mar. 22, 1958	7.22 10.05 7.64 7.73 9.80 14.70	2,620 5,940 3,040 3,130 5,620 12,900	1961	Dec. 26, 1959 Jan. 12, 1960 Jan. 27, 1960 Feb. 2, 1960 Mar. 23, 1960 Apr. 7, 1961	14.68 13.90 5.89 6.66 6.79	12,900 11,600 1,500 1,930 2,050
1959	Apr. 23, 1958 Aug. 1, 1958 Sept.14, 1958 Oct. 7, 1958 Aug. 7, 1959	9.79 3.92 5.38 6.88 4.12	5,610 527 1,210 2,300 606	1361	Aug. 19, 1961 Aug. 21, 1961 Aug. 22, 1961 Aug. 22, 1961 Aug. 29, 1961 Sept.14, 1961	4.19 4.39 4.92 4.20 5.00	526 616 872 529 914
	Aug. 16, 1959 Aug. 18, 1959 Aug. 19, 1959 Aug. 25, 1959 Aug. 26, 1959 Aug. 28, 1959	4.07 11.75 11.15 5.45 7.49 6.24	586 8,300 7,450 1,300 2,930 1,850	1962	Dec. 11, 1961 Dec. 16, 1961 Jan. 9, 1962 Jan. 25, 1962 Feb. 14, 1962 Mar. 3, 1962 Apr. 17, 1962	5.30 5.74 5.63 9.44 6.64 5.35 8.18	1,040 1,330 1,250 4,920 2,020 1,070 3,430
1960	Oct. 30, 1959	5.28	1,150	ľ	Sept.27, 1962	4.60	742

a This is second highest peak during year, being exceeded by an unknown amount by flood of Jan. 28, 1915.

4910. North Fork White River near McNary, Ariz. (Previously published as White River near McNary, Ariz.)

Location.--Lat 34°02'45", long 109°44'15", in $\rm E^1_2$ sec.31, T.8 N., R.25 E. (unsurveyed), in Fort Apache Indian Reservation, 2 miles downstream from Paradise Creek, $6\frac{3}{4}$ miles southeast of McNary, and $47\frac{1}{2}$ miles upstream from confluence with Black River.

Drainage area. -- 66 sq mi, approximately.

 $\underline{\text{Gage.--Recording.}}$ Altitude of gage is 7,750 ft (from Indian Irrigation Service river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 350 cfs and extended above by logarithmic plotting.

Remarks.--No storage above station. One small canal diverting about 5 miles upstream has no effect on peak discharges. Base for partial-duration series, 175 cfs. Only annual peaks are shown prior to 1955.

Peak stages and discharges of White River near McNary, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Sept.19, 1946	5.36	1,290	1957	Aug. 26, 1957	3.62	570
1948 1949 1950	Apr. 16, 1948 Apr. 15, 1949 March or April 1950	5.02 3.70 2.23	al,120 656 188	1958	Apr. 22, 1958 May 11, 1958 May 27, 1958 June 6, 1958	4.94 2.76 2.61 2.52	1,230 298 241 223
1951 1952	Aug. 28, 1951 Apr. 6, 1952	2.13 4.10	167 748	1959	Oct. 5, 1958	2.18	148
1953 1954	Mar. 29, 1953 Mar. 23, 1954	2.03	152 304	1960	Mar. 26, 1960 Apr. 13, 1960 May 13, 1960	2.99 2.27 2.36	390 178 195
1955	-	2,12	145	1961	Apr. 5, 1961	2.74	248
1956	-	2.24	170	1962	Apr. 16, 1962	4.80	680
1957	July 27, 1957 Aug. 24, 1957	2.51 3.99	232 729	1902	May 12, 1962	3.44	338

a Maximum observed; may have been exceeded about Apr. 12.

4924. East Fork White River near Fort Apache, Ariz.

Location.--Lat 33°49'20", long 109°48'50", in NW $_{\overline{u}}^1$ sec.21, T.5 N., R.24 E., in Fort Apache Indian Reservation, on downstream side of left abutment of highway bridge, a quarter of a mile upstream from Rock Creek and $10^1_{\overline{u}}$ miles east of Fort Apache.

Drainage area .-- 38.8 sq mi.

Gage.--Recording. At datum 0.14 ft lower prior to Dec. 29, 1960. Altitude of gage is 6,060 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 180 cfs and extended above on basis of slope-area measurement at 663 cfs.

Remarks. -- One small diversion for irrigation above station does not materially affect peak flows. Base for partial-duration series, 75 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Mar. 22, 1958 Apr. 22, 1958	2.58 3.23	216 4 11	1959	Aug. 24, 1959	2,58	230
	May 8, 1958	2.64	235	1960	Nov. 2, 1959	2.23	96
	Aug. 19, 1958	2,16	86	1	Mar. 23, 1960	2.31	110
	Sept. 9, 1958	2.19	86))	Apr. 11, 1960	2.44	142
	Sept.13, 1958	2.54	198	l	Apr. 22, 1960 May 13, 1960	2.48 2,63	152 207
1959	Oct. 6, 1958	2.85	330	II.			Ţ
	July 29, 1959	2.29	121	1961	Aug. 17, 1961	5.7	663
	Aug. 2, 1959	2.39	152		_		1
	Aug. 11, 1959	2.11	75	1962	Apr. 15, 1962	2.94	246
	Aug. 18, 1959	2.31	127	11	May 12, 1962	-	a300
	Aug. 22, 1959	2.57	225	II .			

a About.

4925. Rock Creek near Fort Apache, Ariz.

Location. --Lat 33°49'25", long 109°49'05", in NW_4^1 sec.21, T.5 N., R.24 E. (unsurveyed), in Fort Apache Indian Reservation, on right bank at dcwnstream side of highway bridge, 200 ft upstream from mouth and 10 miles east of Fort Apache.

Drainage area .-- 20.3 sq mi.

Gage. -- Recording gage and concrete control. Altitude of gage is 6,030 ft (by barometer).

Stage-discharge relation. -- Defined by current-meter measurements below 95 cfs.

Remarks. -- Base for partial-duration series, 40 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955 a/	Aug. 22, 1955 Aug. 24, 1955	3.33 3.64	62 112	1959	Aug. 24, 1959	2.94	29
1 9 56	Mar. 24, 1956	2.81	20	1960	Nov. 2, 1959 Dec. 25, 1959 Mar. 13, 1960	3.25 3.24 3.50	54 54 79
1957	Jan. 10, 1957	3.03	34		Mar. 23, 1960	3.60	98
1958	Mar. 22, 1958	4.21	217				

a Period June to September.

4940. White River near Fort Apache, Ariz.

Location. --Lat 33°44'10", long 110°09'55", in $SE^{\frac{1}{4}}$ sec. 32, T.4 $\frac{1}{2}$ N., R.21 E. (unsurveyed), in Fort Apache Indian Reservation, on right bank 2,200 ft downstream from highway bridge, 5 miles upstream from mouth, and 11 miles west of Fort Apache.

Drainage area .-- 632 sq mi.

Gage.--Recording. Datum of gage is 4,365.99 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs and extended above on basis of slope-area measurements at 3,590 and 4,900 cfs.

Remarks. -- Small diversions above station for irrigation of 1,460 acres do not materially affect peak flows. Base for partial-duration series, 500 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Mar. 17, 1958 Mar. 22, 1958 Apr. 23, 1958 Aug. 2, 1958 Aug. 16, 1958 Sept.12, 1958 Sept.14, 1958	3.75 6.80 6.86 3.80 5.14 4.85 3.74	672 2,700 2,610 546 1,350 1,170 518	1960	Oct. 30, 1959 Nov. 2, 1959 Dec. 26, 1959 Jan. 11, 1960 Mar. 14, 1960 Mar. 23, 1960 Aug. 8, 1960	4.52 6.68 6.73 5.39 4.53 5.04 6.35	916 2,540 2,580 1,520 886 1,190 2,220
1959	Oct. 6, 1958 July 19, 1959 July 28, 1959 July 30, 1959 July 31, 1959 Aug. 6, 1959 Aug. 13, 1959 Aug. 18, 1959 Aug. 19, 1959 Aug. 24, 1959 Aug. 25, 1959 Aug. 27, 1959	4.26 4.85 9.2 4.16 4.28 4.76 4.08 4.55 4.39 4.26 4.26	778 1,150 4,900 727 790 1,100 666 940 814 727 727 856	1961	June 16, 1961 Aug. 7, 1961 Aug. 14, 1961 Aug. 19, 1961 Aug. 22, 1961 Aug. 29, 1961 Feb. 16, 1962 July 27, 1962 Sept. 8, 1962 Sept. 8, 1962 Sept. 17, 1962	4.86 3.95 4.35 3.92 5.37 8.05 4.45 6.40 4.68 5.70 4.58	1,080 545 760 535 1,400 3,590 700 2,090 818 1,530 758

4943. Carrizo Creek above Corduroy Creek, near Show Low, Ariz.

Location. --Lat 34°00'00", long 110°17'20", in sec.13, T.7 N., R.19 E. (umsurveyed), in Fort Apache Indian Reservation, half a mile upstream from Corduroy Creek and 23 miles southwest of Show Low.

Drainage area .-- 237 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Concrete control since June 5, 1956. Altitude of gage is 5,240 ft (based on datum of downstream gage and probable slope of streambed).

Stage-discharge relation. -- Defined by current-meter measurements below 280 cfs and extended above on basis of computation of peak flows for related stations.

Remarks.--No storage or diversion above station. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage leight (feet)	Discharge (cfs)
1954	Mar. 23, 1954 July 9, 1954 July 24, 1954 Sept.24, 1954	5.07 5.73 4.40 4.09	1,670 2,760 950 703	1958	Sept. 4, 1958 Sept. 9, 1958 Sept.12, 1958	6.68 4.46 4.44	2,870 631 619
1955	Aug. 1, 1955 Aug. 10, 1955 Aug. 13, 1955 Aug. 18, 1955	4.45 5.08 4.45 5.20	995 1,680 995 1,850	1959	Oct. 5, 1958 Aug. 17, 1959 Aug. 19, 1959 Aug. 19, 1959	4.43 4.67 4.55 5.28	625 762 681 1,240
1956	July 26, 1956 Aug. 14, 1956	5.60 6.35	1,580 2,470	1960	Nov. 2, 1959 Dec. 25, 1959 Jan. 11, 1960	5.04 6.51 6.95	923 2,630 3,260
1957	Jan. 10, 1957 Aug. 31, 1957	4.44 4.85	65 4 935	1961	Sept. 6, 1961	4.56	694
1958	Mar. 22, 1958	4.46	631	1962	Feb. 13, 1962	3.83	340

4945. Corduroy Creek above Forestdale Creek, near Show Low, Ariz.

Location: --Lat 34°06'40", long 110°07'50", in NW1 sec.9, T.8 N., R.21 E. (unsurveyed), in Fort Apache Indian Reservation, on left bank 700 ft upstream from Forestdale Creek and 11½ miles southwest of Show Low.

Drainage area .-- 57.0 sq mi.

Gage.--Recording. Concrete control since May 19, 1956. Datum of gage is
6,334.23 ft above mean sea level (State Highway Department bench mark).

 $\frac{\text{Stage-discharge relation.--Defined by current-meter measurements below 900 cfs}}{\text{and extended to 2,210 cfs on basis of slope-area measurement at 7.95 ft.}}$

Remarks.--No storage or diversion above station. Base for partial-duration series, 150 cfs.

Peak stages and discharges of Corduroy Creek above Forestdale Creek, near Show Low, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Mar. 8, 1953	4.56	361	1957	July 27, 1957 Aug. 17, 1957	7.05 4.76	1,140 340
1954	Mar. 23, 1954 July 21, 1954 July 22, 1954	7.95 4.64 4.05	1,570 350 203	1958	Mar. 17, 1958 Mar. 22, 1958	4.13 5.81	164 556
	July 23, 1954	4.32	266	1959	Aug. 18, 1959	3.30	53
1955	July 31, 1955 Aug. 7, 1955 Aug. 15, 1955	4.49 5.95 3,87	309 739 165	1960	Oct. 30, 1959 Nov. 2, 1959 Dec. 25, 1959 Jan. 11, 1960	4.00 9.03 7.28 5.85	150 2,210 1,270 673
1956	Mar. 4, 1956	2.80	22		Mar. 7, 1960	4.35	204

4955. Forestdale Creek near Show Low, Ariz.

<u>Location</u>.--Lat 34°06'50", long $110^{\circ}07'45$ ", in $SE^{\frac{1}{4}}$ sec.4, T.8 N., R.21 E. (unsurveyed), in Fort Apache Indian Reservation, on right bank 375 ft upstream from mouth, 8 miles downstream from end of pipeline diverting from Lake Show Low, and $11\frac{1}{2}$ miles southwest of Show Low.

Drainage area. -- 33.4 sq mi.

 $\underline{\text{Gage.--Recording}}$ gage and concrete control. Datum of gage is 6,334.23 ft above mean sea level (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 340 cfs and extended to 1,290 cfs on basis of slope-area measurement at 6.90 ft and logarithmic plotting.

Remarks. -- No storage or diversion from creek above station. Transbasin diversions from Show Low Creek do not materially affect peak flows. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1953	Mar. 8, 1953	5.64	106	1957	Sept. 1, 1957	6.15	223
1954	Mar. 23, 1954	5.76	130	1958	Aug. 5, 1958	5.22	43
1955	Aug. 23, 1955	5.18	43	1959	Aug. 5, 1959	5.50	81
1956	July 21, 1956	6.50	315	1960	Nov. 2, 1959	7.95	1,290
1957	July 27, 1957	6.90	490		Dec. 25, 1959 Jan. 11, 1960	6.48 6.33	350 275

4960. Corduroy Creek near mouth, near Show Low, Ariz.

Location. --Lat 34°01'00", long 110°14'30", in sec.9, T.7 N., R.20 E. (unsurveyed), in Fort Apache Indian Reservation, on right bank 4 miles upstream from mouth and 20 miles southwest of Show Low.

Drainage area. -- 213 sq mi.

<u>Gage.--Recording.</u> Concrete control since May 29, 1956. Altitude of gage is 5,350 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended above on basis of slope-area measurements at 10,900 cfs.

Remarks. -- No storage or diversion from creek above station. Transbasin diversions from Show Low Creek do not materially affect peak flows. Base for partial-duration series, 500 cfs.

Peak stages and discharges of Corduroy Creek near mouth, near Show Low, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Dec. 31, 1951 Jan. 13, 1952 Jan. 18, 1952	8.14 10.95 11.1	5,190 10,600 10,900	1957	Jan. 10, 1957 Aug. 2, 1957	4.35 5.15	765 1,420
	Mar. 15, 1952 Apr. 27, 1952	4.17 3.66	1,070	1958	Mar. 22, 1958	4.98	1,140
1953	Mar. 8, 1953	3.86	666	1959	Aug. 19, 1959	3.52	316
	July 29, 1953	4.68	1,200	1960	Nov. 2, 1959 Dec. 25, 1959	8.45 8.08	3,430 3,500
1954	Mar. 23, 1954 Mar. 27, 1954	6.22 4.00	2,450 561		Jan. 11, 1960 Mar. 7, 1960	7.30 4.25	2,700 520
1955	Aug. 7, 1955	3.29	257	1961	Aug. 22, 1961	4.12	512
1956	Aug. 17, 1956	3.09	149	1962	Feb. 18, 1962	5.30	841

4965. Carrizo Creek near Show Low, Ariz.

Location. --Lat 33°59'15", long 110°17'00", in sec.24, T.7 N., R.19 E. (unsurveyed), in Fort Apache Indian Reservation, on upstream side of center pier of bridge on U.S. Highway 60, 1 mile downstream from Corduroy Creek, 23½ miles southwest of Show Low, and 24 miles upstream from mouth.

Drainage area .-- 459 sq mi.

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 5,225.11 ft above mean sea level (State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs and extended above on basis of slope-area measurement at 20,500 cfs.

Remarks.--Diversion for irrigation of less than 300 acres above station. Records include transbasin diversion from Show Low Creek. Diversions do not materially affect peak flows. Base for partial-duration series, 1,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951 <u>a</u> /	Aug. 2, 1951 Aug. 28, 1951	5.67 6.91	1,380 3,260	1956	July 26, 1956 Aug. 14, 1956	4.55 5.28	1,580 2,400
19 52	Dec. 31, 1951 Jan. 13, 1952 Jan. 18, 1952 Mar. 15, 1952	8.62 10.60 12.08 3.97	8,090 14,900 20,500 1,060	1957	Jan. 10, 1957 Aug. 2, 1957 Aug. 31, 1957	4.05 4.40 4.00	1,040 1,360 1,000
	Sept.21, 1952	3.94	1,030	1958	Mar. 22, 1958 Sept. 4, 1958	4.60 5.71	1,510 2,920
1953	July 29, 1953	5.88	3,200	1959	Aug. 19, 1959	4.67	1,560
1954	Mar. 23, 1954 July 9, 1954 July 24, 1954	5.95 5.23 3.80	3,910 2,720 1,000	1960	Nov. 2, 1959 Dec. 25, 1959 Jan. 11, 1960	7.05 7.94 8.10	4,580 6,630
1955	Aug. 10, 1955 Aug. 18, 1955	4.14 5.00	1,200 2,060		Jan. 11, 1960	6.10	6,980

a Period June to September.

4975. Salt River near Chrysotile, Ariz.

Location. --Lat 33°48', long 110°30', in sec.25, T.5 N., R.17 E. (unsurreyed), in San Carlos Indian Reservation, 1,200 ft upstream from bridge on U.S. Highway 60, 5½ miles northeast of Chrysotile, 8 miles upstream from Cibecue Creek, and 33 miles downstream from confluence of Black and White Rivers.

Drainage area. -- 2,849 sq mi.

Gage. --Nonrecording prior to Oct. 1, 1924; recording thereafter. Datum of gage Is 3,354.57 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 52,000 cfs and extended above by logarithmic plotting.

<u>Historical data.</u>-Flood peak of 74,000 cfs (gage height, 18 ft, from floodmark) is believed to be flood of Jan. 19, 1916.

 $\frac{Remarks.--Peak\ discharges\ not\ materially\ affected\ by\ regulation\ and\ diversions.}{Base\ for\ partial-duration\ series,\ 3,500\ cfs.}$

Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1916	Jan. 19, 1916	18	74,000	1937	Feb. 17, 1937	5.86	5,050	
1925	Man 0 1025	6.5	6,930		Mar. 14, 1937 Mar. 17, 1937	6.45 7.41	6,430 9,700	
1925	Mar. 8, 1925 Sept. 3, 1925	5.38	4,400		Apr. 16, 1937	6.14	5,700	
1926	Mar. 30, 1926	5.15	4,000	1938	Mar. 4, 1938	9.68	19,000	
	Apr. 6, 1926	8.5	13,600]]	Aug. 5, 1938	5.51	4,400	
	Apr. 20, 1926	5.28	4,230	l	Aug. 13, 1938	6.55	6,700	
	Apr. 29, 1926	5.82	5,270	1939	Apr. 5, 1939	7.10	8,530	
ĺ	May 6, 1926 July 11, 1926	5.62 7.51	4,810 9,930	1939	Apr. 5, 1939	7.10	0,550	
	Sept.26, 1926	5.10	3,920	1940	Aug. 15, 1940	6.40	6,300	
1927	-	9.9	19,900		Sept.29, 1940	5.08	3,730	
1921	Feb. 17, 1927 Mar. 15, 1927	5.33	4,240	1941	Dec. 13, 1940	6.98	8,340	
}	Sept.17, 1927	6.78	7,750	2011	Dec. 25, 1940	10.36	22,500	
	•	1			Dec. 31, 1940	8.52	13,600	
1928	July 21, 1928	3.58	1,670	H	Jan. 12, 1941	8.76	14,900	
1929	Apr. 5, 1929	7.93	11,400	ll .	Jan. 29, 1941 Feb. 8, 1941	6.85 5.92	7,750 5,490	
1959	Apr. 5, 1929 July 29, 1929	5.96	5,420		Feb. 26, 1941	6.68	7,470	
1	Aug. 8, 1929	4.98	3,730	1	Mar. 3, 1941	5.01	3,710	
i	Aug. 12, 1929	6.28	6,370	Ì	Mar. 14, 1941	15.08	52,200	
	Sept.23, 1929	7.95	11,500	l)	Apr. 3, 1941	6.45	6,670	
1930	Mar. 17, 1930	7.47	9,930	l	Apr. 14, 1941 May 6, 1941	6.17 7.12	6,060 8,640	
1930	July 9, 1930	6.04	5,820	i	Aug. 10, 1941	6.19	6,180	
	Aug. 11, 1930	8.0	11,700		Sept.29, 1941	6,33	6,420	
1931	Feb. 15, 1931	6.67	7,400	1942	Dec. 13, 1941	5,16	3,980	
	Aug. 7, 1931	5.90	5,550		Jan. 13, 1942	5.89	5,380	
J	Sept.19, 1931	5.92	5,590		Apr. 6, 1942	5.25	4,070	
1932	Oct. 2, 1931	6.25	6,240	1943	Jan. 24, 1943	8.2	12,400	
	Feb. 10, 1932	13.3	40,000		Mar. 5, 1943	8.32	12,800	
- 1	Feb. 20, 1932 Mar. 2, 1932	6.7 5.50	7,460 4,620	i :	Sept.26, 1943	5.54	4,750	
	Mar. 20, 1932	4.88	3,550	1944	Oct. 19, 1943	4.14	2,380	
- 1	Apr. 5, 1932	5.58	4,770			•		
	July 25, 1932	5.24	4,150	1945	Mar. 27, 1945	5.41	4,450	
	July 30, 1932	5.0	3,740		Apr. 23, 1945	5.36	4,360	
1933	Feb. 28, 1933	4.40	2,880	1946	Oct. 8, 1945 Sept.19, 1946	5.48 7.44	4,650 9,600	
1934	Aug. 4, 1934	6.08	3,760	ł	Dept. 13, 1310		,,,,,,	
	Aug. 20, 1934	6.20	3,850	1947	Sept.18, 1947	6.97	8,160	
1935	Jan. 12, 1935	6.52	5,340	1948	Oct. 14, 1947	5.24	3,970	
	Jan. 16, 1935	6.05	4,140	i	Apr. 12, 1948	6.04	5,730	
	Feb. 7, 1935	8.60	14,000	7040		0.05	14 000	
	Feb. 11, 1935 Feb. 15, 1935	6.50 5.58	5,870 3,760	1949	Jan. 14, 1949 Mar. 8, 1949	8.65 5,50	14,200 4,510	
	Mar. 15, 1935	5.90	4,200		Mar. 8, 1949 Apr. 16, 1949	5.40	4,310	
	Apr. 9, 1935	9.00	15,700		Apr. 24, 1949	5.23	3,990	
	Aug. 29, 1935	5.70	4,020		July 23, 1949	5.64	4,790	
1076	Heb 17 1070	0.40	17 000		Aug. 8, 1949	5.66	4,840	
1936	Feb. 17, 1936 Mar. 24, 1936	8.40 5.57	13,200 4,040	1950	July 21, 1950	4.28	2,500	
j	Apr. 15, 1936	5.82	4,570	1000	041, 11, 1500	1.20	2,000	
				1951	Aug. 29, 1951	5,79	5,150	
1937	Feb. 7, 1937	15.18	52,900	1			ĺ	

Peak stages and discharges of Salt River near Chrysotile, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	Dec. 31, 1951	12.3	33,600	1958	Feb. 26, 1958	5.96	5,410 6,850
	Jan. 14, 1952 Jan. 18, 1952	15.0 14.9	51,500 50,800		Mar. 17, 1958 Mar. 22, 1958	6.50 9.85	19,700
	Mar. 19, 1952	5.01	3,680	1	Apr. 23, 1958	6.92	8,030
	Apr. 8, 1952	6.25	6,100	H	Sept. 2, 1958	5.16	3,960
	Apr. 17, 1952	5.79	5,200		Dept. 2, 1900	0.10	0,000
	Apr. 28, 1952	7.00	8,270	1959	Aug. 20, 1959	6.78	7,290
			-,	1	Aug. 27, 1959	5.65	4,650
1953	July 30, 1953	5.01	3,680	11			Í
				1960	Oct. 30, 1959	5.68	4,910
1954	Mar. 23, 1954	11.70	28,700	[[Nov. 2, 1959	8.39	12,300
	Aug. 5, 1954	5.01	3,630	II.	Dec. 26, 1959	11.45	26,200
	Sept. 2, 1954	6.22	6,050	II	Jan. 12, 1960	10.80	22,600
				{}	Mar. 14, 1960	4.99	3,530
1955	Aug. 6, 1955	5.98	5,590		. 70 7007	3.93	0.170
	Aug. 18, 1955	5.43	4,460	1961	Aug. 30, 1961	3.93	2,130
	Aug. 21, 1955	6.40	6,590	1962	Jan. 25, 1962	6.12	5.630
	Aug. 23, 1955	7.18	8,820	1902	Feb. 13, 1962	5.18	3,650
1956	Jan. 29, 1956	3.58	1,640	ll.	Apr. 17, 1962	6.00	5,160
1930	J 0011. L3, 1330	3.30	1,640	IJ	Apr. 17, 1502	-1.50] 3,100
1957	Aug. 2, 1957	5.05	3,760				

4985. Salt River near Roosevelt, Ariz.

Location. -- Lat 33°37'10", long ll0°55'15", in SElNEL sec.9, T.3 N., R.14 E. (unsurveyed), 100 ft downstream from bridge on Globe-Young highway, a quarter of a mile downstream from Pinal Creek, l mile upstream from diversion dam for power canal, 14 miles east of village of Roosevelt, and 17 miles upstream from Roosevelt Dam.

Drainage area .-- 4,306 sq mi.

Gage.--Nonrecording prior to Jan. 17, 1935; recording thereafter. Datum of gage is 2,177.14 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 55,000 cfs and extended above on basis of velocity-area studies and float-area measurements at 66,000 and 102,000 cfs.

Historical data.--Flood of Jan. 19, 1916, discharge, about 100,000 cfs, by computation of flow past Roosevelt Dam, was the greatest known up to that time since 1906, and has been exceeded only in 1941 and 1952.

Remarks.--Peak discharges not significantly affected by regulation and diversions. Base for partial-duration series, 4,000 cfs. Only annual peaks are shown prior to 1935.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Jan. 19, 1916	-	100,000	1936	Mar. 24, 1936 Apr. 16, 1936	8.48 8.70	4,660 4,820
1925	Mar. 9, 1925	7.2	9,000	1937	Feb. 7, 1937	23.4	88,000
1926 1927 1928	Apr. 7, 1926 Feb. 18, 1927 Feb. 5, 1928	13.0 16.5 6.5	21,000 40,000 2,600		Feb. 17, 1937 Mar. 14, 1937 Mar. 17, 1937	12.53 14.09 15.64	6,470 11,200 19,700
1929 1930	Sept.23, 1929 Mar. 17, 1930	13.0	15,000 8,300		Apr. 17, 1937	11.43	5,890
1931 1932 1933	Feb. 15, 1931 Feb. 10, 1932 Feb. 28, 1933	14.0 22 7.8	22,000 57,000 4,200	1938	Mar. 4, 1938 Aug. 5, 1938 Aug. 14, 1938	16.38 12.19 10.95	24,100 8,300 5,700
1934	Aug. 4, 1934	9.0	5,500	1939	Apr. 5, 1939	12.35	9,050
1935	Jan. 13, 1935 Jan. 16, 1935	9.87 9.13	6,180 4,850	1940	July 16, 1940	10.80	4,610
	Feb. 7, 1935 Feb. 15, 1935 Mar. 3, 1935 Mar. 15, 1935 Apr. 9, 1935 Aug. 1, 1935	13.43 8.30 8.96 8.96 12.94 8.25	15,100 4,340 5,870 5,530 15,200 4,420	1941	Dec. 13, 1940 Dec. 25, 1940 Dec. 31, 1940 Jan. 11, 1941 Jan. 29, 1941 Feb. 8, 1941 Feb. 26, 1941	13.75 17.93 16.79 17.44 12.82 12.10 12.99	11,600 31,600 24,900 31,600 8,620 6,290 8,350
1936	Feb. 17, 1936	12.60	13,800		Mar. 2, 1941	12.42	6,540

Peak stages and discharges of Salt River near Roosevelt, Ariz. -- Contirued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar. 14, 1941 Apr. 3, 1941 Apr. 14, 1941 May 8, 1941	24.4 13.26 12.81 13.78	117,000 8,350 7,300 9,520	1952	Apr. 9, 1952 Apr. 21, 1952 Apr. 28, 1952	13.93 13.72 14.47	6,980 6,370 9,050
	Aug. 10, 1941 Sept.29, 1941	12.11	6,540 6,290	1953	Mar. 9, 1953	12.25	4,320
1942	Jan. 13, 1942	11.80	5,140	1954	Mar. 23, 1954	19.29	40,800
1943	Jan. 24, 1943 Mar. 5, 1943 Sept.26, 1943	14.75 15.75 11.38	14,700 16,500 4,770	1955	Aug. 7, 1955 Aug. 19, 1955 Aug. 22, 1955 Aug. 24, 1955	12.36 13.22 13.43 14.07	4,690 6,350 6,840 8,640
1944	Sept.26, 1944	10.60	4,560	1956	Jan. 29, 1956	8.97	1,460
1945	Mar. 27, 1945 Apr. 24, 1945	11.30 10.94	5,450 4,860	1957	Jan. 10, 1957 July 16, 1957 Aug. 20, 1957	13.38 12.10 11.88	6,720 4,340 4,100
1946	Sept.19, 1946	15.62	15,100	1958	Feb. 26, 1958	12.52	5,880
1947	Sept.19, 1947	12.88	6,170		Mar. 17, 1958 Mar. 23, 1958	14.09 17.25	8,200 24,000
1948	Apr. 13, 1948	12.16	5,960		Apr. 24, 1958	13.11	7,920
1949	Jan. 10, 1949 Jan. 14, 1949 Mar. 8, 1949	12.51 16.45 12.42	6,340 15,500 5,000	1959	Aug. 20, 1959 Aug. 27, 1959	15.00 11.66	12,100 4,230
	Apr. 17, 1949 July 24, 1949 Aug. 9, 1949	11.98 11.65 12.29	4,260 4,120 4,740	1960	Oct. 30, 1959 Nov. 3, 1959 Dec. 26, 1959 Jan. 12, 1960	15.55 16.22 22.30 18.90	13,900 17,200 78,200 32,600
1950	July 21, 1950	12,47	5,930		Mar. 15, 1960 Mar. 24, 1960	11.80 11.74	4,070 4,240
1951	Aug. 2, 1951 Aug. 28, 1951	13.40 18.10	7,070 27,600	1961	July 28, 1961 Aug. 22, 1961	_ 11.44	2,590
1952	Dec. 31, 1951 Jan. 14, 1952 Jan. 18, 1952 Mar. 16, 1952	20.30 22.80 25.3 13.20	42,300 74,100 111,000 4,790	1962	Jan. 25, 1962 Feb. 14, 1962 Apr. 12, 1962	13.00 11.84 12.31	8,540 4,440 5,440

4990. Tonto Creek above Gun Creek, near Roosevelt, Ariz.

<u>Location</u>.--Lat 33°59', long lll°18', in $NE_4^1SW_4^1$ sec.2, T.7 N., R.10 E., in Tonto National Forest, 600 ft upstream from Gun Creek and $23\frac{1}{2}$ miles northwest of village of Roosevelt Dam.

Drainage area. -- 675 sq mi.

 $\underline{\text{Gage.--Nonrecording prior}}$ to Jan. 29, 1941; recording thereafter. Datum of gage $\overline{\text{Is 2,523.14}}$ ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 7,700 cfs and extended above on basis of slope-area measurement of 1941 peak for period prior to 1951. Validity of relations used confirmed by slope of rating developed in 1951, which was defined by current-meter measurements below 27,000 cfs and extended by logarithmic plotting. Relation subject to large shifts.

Remarks.--Peak discharges unaffected by small diversions. Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Dec. 18, 1940 Dec. 25, 1940	4.75 14.0	2,010 26,700	1942	Dec. 11, 1941	5.86	1,250
	Dec. 30, 1940 Feb. 7, 1941 Feb. 25, 1941	11.2 7.02 6.72	14,200 2,840 2,530	1943	Jan. 24, 1943 Mar. 5, 1943	8.52 11.6	5,730 15,800
	Mar. 2, 1941 Mar. 5, 1941 Mar. 14, 1941	8.87 6.91 15.1	6,610 2,680 32,000	1944	Feb. 24, 1944 Mar. 2, 1944 Mar. 14, 1944	7.29 6.75 6.78	2,990 1,990 1,880
	Apr. 3, 1941 Apr. 13, 1941 May 2, 1941	6.95 9.14 10.18	2,600 7,530 10,600	1945	Mar. 10, 1945 Mar. 16, 1945	6.70 7.29	1,750 2,760

Peak stages and discharges of Tonto-Creek above Gun Creek, near Roosevelt, Ariz .-- Con.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage leight (feet)	Discharge (cfs)
1945	Mar. 25, 1945 Aug. 11, 1945 Aug. 17, 1945	7.01 8.5 7.18	2,280 5,320 2,780	1955	July 25, 1955 Aug. 6, 1955 Aug. 10, 1955 Aug. 12, 1955	9.82 10.55 6.22 6.16	12,000 15,200 2,240 2,150
1946	Aug. 24, 1946 Aug. 26, 1946 Sept.18, 1946	7.49 6.78 9.60	3,000 1,880 10,200		Aug. 21, 1955 Aug. 22, 1955 Aug. 23, 1955 Aug. 24, 1955	8.50 6.14 8.13 8.13	7,550 2,110 6,470 6,470
1947	Nov. 15, 1946 Dec. 28, 1946 Aug. 16, 1947	6.52 8.78 7.10	1,930 7,130 2,800	1956	July 18, 1956	6.27	2,330
1948	Aug. 21, 1947 July 26, 1948	6.39 7.32	1,780 3,240	1957	Jan. 9, 1957 Jan. 27, 1957 Aug. 16, 1957	10.60 9.50 8.00	15,000 11,200 6,630
1949	Dec. 23, 1948 Dec. 28, 1948 Jan. 13, 1949 Jan. 25, 1949	6.95 6.45 9.60 6.76	2,540 1,770 9,890 2,1 4 0	1958	Oct. 31, 1957 Feb. 26, 1958 Mar. 16, 1958 Mar. 22, 1958 Apr. 4, 1958	6.02 7.14 7.75 9.30 6.36	2,000 4,300 5,920 10,600 2,600
1950	July 7, 1950 July 16, 1950	7.0 8.25	2,500 5,500	1959	July 29, 1959 Aug. 1, 1959	6.43 6.10	2,730 2,140
1951	Aug. 28, 1951	14.10	31,100	1	Aug. 19, 1959	9.45	11,100
1952	Dec. 31, 1951 Jan. 14, 1952 Jan. 18, 1952 Mar. 2, 1952 Mar. 15, 1952 Apr. 20, 1952	14.4 7.30 16.55 6.35 6.15 6.50	33,900 3,560 45,400 3,360 2,900	1960	Oct. 30, 1959 Nov. 2, 1959 Dec. 26, 1959 Jan. 11, 1960 Mar. 2, 1960	9.28 6.70 13.00 10.32 7.54	10,500 3,270 25,200 13,100 4,990
1	Apr. 29, 1952	6.24	2,5 4 0 2,100	1961	Sept. 8, 1961	10.00	12,900
1953	July 30, 1953	6.79	2,620	1962	Mar. 8, 1962 Sept. 6, 1962	6.19 6.97	1,720 3,000
1954	Mar. 23, 1954 Mar. 25, 1954	8.68 6.52	8,100 2,770		-		
1955	June 13, 1955	8.92	8,850				

5030. Granite Creek near Prescott, Ariz.

Location. --Lat 34°34', long 112°27', in SW1 sec.26, T.14 N., R.2 W. (unsurveyed), at bridge on U.S. Highway 89, 2 miles north of Prescott, 3 miles upstream from dam forming Watson Lake, and 4½ miles upstream from Willow Creek.

Drainage area .-- 39.6 sq mi.

Gage.--Recording. Datum of gage is 5,207.3 ft above mean sea level (Arizona Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs and extended above. Relation subject to large shifts.

Remarks.--Records for period July 1941 to February 1945 furnished by Bureau of Reclamation. Peak discharges unaffected by small diversions for municipal use. Base for partial-duration series, 200 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	Sept. 7, 1933	5.89	230	1937	Mar. 17, 1937 Aug. 14, 1937	7.19 7.95	1,290 1,670
1934	Aug. 4, 1934 Aug. 17, 1934 Aug. 30, 1934	6.61 6.8 7.15	390 413 450	1938	Mar. 3, 1938 Mar. 12, 1938 Aug. 4, 1938	8.70 5.68 6. 4 0	2,400 370 646
1935	Feb. 7, 1935 Aug. 25, 1935 Aug. 30, 1935	7.96 6.6 7.75	a500 290 600	1939	Sept.16, 1938 Aug. 4, 1939	6.0 6.45 6.12	227 638 462
1936	July 31, 1936 Sept.11, 1936	6.4 7.41	2 4 7 500		Aug. 14, 1939 Sept. 6, 1939 Sept. 9, 1939	5.47 5.73	220 322
1937	Feb. 7, 1937 Feb. 14, 1937	9.20 7.56	2,900 1, 4 20	1940	Sept.29, 1940	4.36	83
a Es	timated.						

Peak stages and discharges of Granite Creek near Prescott, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Oct. 5, 1940 Dec. 24, 1940	5.55 5.71	530 616	1943	Aug. 28, 1943	7.3	1,780
	Feb. 21, 1941 Mar. 1, 1941	5.50 7.00	487 1,530	1944	Mar. 14, 1944	5.3 4	297
	Mar. 14, 1941 Apr. 13, 1941 Sept.13, 1941	5.65 5.52 5.55	579 499 411	1945	Mar. 15, 1945 July 30, 1945 Aug. 10, 1945	7.18 6.29 8.20	1,670 828 2,200
1942	July 14, 1942 Aug. 4, 1942 Aug. 17, 1942	6.55 5.9 6.95	1,080 610 1,110	1946	Dec. 23, 1945 July 20, 1946 Aug. 10, 1946 Aug. 20, 1946	6.21 6.88 5.58 6.87	455 899 202 891
1943	Jan. 23, 1943 Mar. 5, 1943	6.25 5.65	750 500		Aug. 24, 1946	6,09	397
	Aug. 7, 1943	6.30	780	1947	July 21, 1947	5,72	251

5045. Oak Creek near Cornville, Ariz.

<u>Location</u>.--Lat 34°46'00", long lll°53'30", in SE_{u}^{\perp} sec.23, T.16 N., R.4 E., at county highway bridge, 0.2 mile upstream from Page Springs, 4 miles northeast of Cornville, and 15 miles upstream from mouth.

Drainage area .-- 357 sq mi.

Gage .-- Recording. Altitude of gage is 3,470 ft (from topographic map).

Stage-discharge relation .-- Defined by current-meter measurements .

Historical data.--The highest stage known is that of Mar. 3, 1938, gage height 23 ft, from floodmarks (discharge unknown).

Remarks.--Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 1,300 cfs.

	reak stages and discharges									
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)			
1938	Mar. 3, 1938	23	-	1950	Oct. 19, 1949 Feb. 7, 1950	10.5 6.11	6,400 1,670			
1941	Oct. 5, 1940 Dec. 17, 1940	6.8 5.74	4,100 2,180		Feb. 27, 1950	5.77	1,390			
	Dec. 25, 1940 Feb. 21, 1941	6.42 6.57	3,300 3,410	1951	Aug. 29, 1951	8,12	3,440			
	Feb. 24, 1941 Mar. 1, 1941	6.29 6.8	2,870 3,980	1952	Dec. 30, 1951 Jan. 18, 1952	14.5 9.35	17,200 7,240			
	Mar. 14, 1941 Apr. 5, 1941 Apr. 16, 1941	7.36 5.31 6.75	5,280 1,420 3,860		Apr. 7, 1952 Aug. 20, 1952	6.15 5.60	1,920 1,360			
1942	Oct. 13, 1941	6.17	2,580	1953	July 14,Aug. 28, 1953	5.10	858			
	Nov. 18, 1941 Apr. 5, 1942 Aug. 10, 1942	5.77 5.76 5.64	1,940 1,940 1,810	1954	Mar. 23, 1954 Mar. 29, 1954 July 22, 1954	9.4 5.95 6.5	7,850 1,920 2,570			
1943	Mar. 4, 1943 Mar. 10, 1943	6.29 6.72	2,530 3,640		Aug. 4, 1954 Sept.11, 1954	5.45 5.9	1,320 1,800			
1944	Apr. 6, 1944 Apr. 14, 1944	6.15 5.79	2,180 1,630	1 9 55	Aug. 23, 1955	8.7	6,400			
1945	Mar. 16, 1945	6.30	1,500	1956	Aug. 17, 1956	4.93	675			
	Apr. 2, 1945 Apr. 9, 1945 Apr. 19, 1945 July 30, 1945 Aug. 9, 1945	5.89 5.75 6.42 7.80 7.75	1,620 1,440 2,370 6,020 5,850	1957	Jan. 9, 1957 Jan. 10, 1957 Feb. 13, 1957 Feb. 23, 1957 June 11, 1957	6.98 8.20 5.98 7.81 6.80	2,670 5,150 1,430 4,200 2,410			
1946 or 1947	-	5.25	1,200	1958	Nov. 3, 1957 Feb. 4, 1958 Feb. 25, 1958 Mar. 17, 1958	9.99 8.19 8.24 7.10	9,620 5,120 5,250 2,660			
1948	July 26, 1948	4.71	605		Mar. 17, 1958 Mar. 22, 1958 Aug. 3, 1958	9.10 8.31	7,450 5,420			
1949	Mar. 20, 1949 Apr. 9, 1949	6.18 6.70	1,470 1,840		Sept.12, 1958	8.87	6,820			
	Sept. 9, 1949	7.15	2,260	1959	Aug. 5, 1959	7.60	3,750			

Peak stages and discharges of Oak Creek near Cornville, Ariz. -- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1960	Dec. 25, 1959 Aug. 31, 1960	7.87 6.00	4,340 1,450	1961	July 31, 1961 Aug. 9, 1961	7.87 6.35	4,340 1,830
1961	Apr. 1, 1961 July 15, 1961	6.25 6.42	1,690 1,910	1962	Feb. 12, 1962 Mar. 28, 1962	9.35 6.57	7,280 2,100

5052.5. Red Tank Draw near Rimrock, Ariz.

Drainage area. -- 49.4 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 3,950 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 100 cfs and extended above on basis of logarithmic plotting and area-velocity study.

Remarks.--Gage-height record collected by U.S. Forest Service July 1, 1959, to June 30, 1961. Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Oct. 31, 1957 Nov. 4, 1957 Feb. 4, 1958 Feb. 25, 1958	3.95 4.48 4.24 4.20	304 497 404 390	1960	Jan. 12, 1960 Mar. 1, 1960 Mar. 7, 1960	4.44 4.72 3.80	481 610 270
	Mar. 16, 1958 Mar. 22, 1958 Apr. 4, 1958 Apr. 9, 1958	5.17 6.42 3.60 4.26	825 1,710 204 411	1961	Mar. 31, 1961 Apr. 1, 1961 Sept.17, 1961	4.58 3.35 4.64	541 148 491
1959	Sept.12, 1958 Feb. 17, 1959	5.80 3.17	1,230 113	1962	Feb. 8, 1962 Feb. 12, 1962 Mar. 5, 1962	5.09 4.69 3.24	785 585 120
1960	Dec. 25, 1959	6.30	1,610		Mar. 26, 1962	3.52	199

5053. Rattlesnake Canyon near Rimrock, Ariz.

Location. -- Lat $34^\circ46^\circ100^\circ$, long lll°40°20°, in $NW_{1}^{1}SW_{1}^{1}$ sec. 24, T.16 N., R.6 E., in Coconino National Forest, 2.6 miles upstream from mouth, 7 miles northeast of Beaver Creek ranger station, and 9 miles northeast of Rimrock.

Drainage area .-- 24.6 sq mi.

<u>Gage.</u>--Recording gage and concrete control. Altitude of gage is 5,100 ft (from topographic map).

Stage-discharge relation. --Defined by current-meter measurements below 400 cfs and extended above on basis of logarithmic plotting.

Remarks. -- Gage-height record furnished by U.S. Forest Service July 1, 1959, to June 30, 1961. Base for partial-duration series, 100 cfs.

Peak stages and discharges of Rattlesnake Canyon near Rimrock, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1958	Nov. 4, 1957 Feb. 4, 1958 Feb. 25, 1958 Mar. 22, 1958 Apr. 2, 1958	6.75 6.37 5.78 7.43 6.90	568 472 351 754 605	1960 1961	Jan. 12, 1960 Feb. 29, 1960 Mar. 6, 1960 Mar. 31, 1961	5.53 4.90 5.15 5.51	305 206 242 302
	Apr. 9, 1958 Sept.12, 1958 Sept.29, 1958	6.04 8.31 5.35	401 1,050 274	1962	Sept.17, 1961 Feb. 8, 1962	5.95 6.73	384 565
1959	Feb. 17, 1959	4.19	119		Feb. 12, 1962 Mar. 26, 1962	7.49 4.72	775 182
1960	Dec. 25, 1959	6.84	590	l			

5060. Verde River near Camp Verde, Ariz.

Location. --Lat 34°27', long 111°47', in sec.1, T.12 N., R.5 E. (unsurveyed), 750 ft upstream from Chasm Creek, 800 ft downstream from Camp Verde damsite, and 9 miles southeast of Camp Verde.

 $\frac{\text{Drainage area.--5,024 sq mi (includes 373 sq mi in Aubréy Valley Playa, a closed basin).}$

 $\underline{\text{Gage.--Recording.}}$ Datum of gage is 2,874.1 ft above mean sea level, datum of $\underline{1929}$.

Stage-discharge relation.--Defined by current-meter measurements below 32,000 cfs and extended above on basis of slope-area measurement at gage height 26.1 ft, and comparison with other stations on Verde River.

Remarks.--Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 4,000 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Lischarge (cfs)
1934	July 17, 1934	10.82	5,500	1940	Aug. 4, 1940	10.2	7,560
1935	Feb. 7, 1935 Mar. 15, 1935 Apr. 9, 1935 Aug. 30, 1935 Sept.27, 1935	11.70 11.92 13.43 11.27 11.38	6,990 7,040 11,500 5,100 5,320	1941	Oct. 5, 1940 Dec. 12, 1940 Dec. 25, 1940 Jan. 1, 1941 Feb. 12, 1941 Feb. 16, 1941	11.8 8.94 12.15 8.71 8.73 9.57	11,100 4,540 11,900 4,070 4,160 5,860
1936	Feb. 24, 1936	12.17	6,820	1	Feb. 21, 1941	13.14	14,600
1937	Feb. 7, 1937 Feb. 15, 1937 Mar. 14, 1937 Mar. 17, 1937	19.9 16.5 12.02 15.2	41,700 25,700 10,100 19,100		Feb. 25, 1941 Mar. 2, 1941 Mar. 14, 1941 Apr. 3, 1941 Apr. 16, 1941	10.73 14.47 16.85 9.24 13.2	8,370 19,000 30,000 5,030 14,100
1938	Feb. 28, 1938 Mar. 3, 1938 Mar. 13, 1938 Aug. 13, 1938	13.08 26.1 9.84 11.00	12,300 97,000 7,230 10,200	1942 1943	Oct. 13, 1941 Mar. 5, 1943 Mar. 11, 1943	9.68 12.25 10.40	6,080 11,600 6,740
1939	Aug. 4, 1939 Sept. 7, 1939 Sept. 13, 1939	10.88 11.22 13.04	9,720 10,700 16,100	1944	Mar. 14, 1944 Mar. 26, 1944 Apr. 14, 1944	9.73 9.55 9.29	5,160 4,860 4,400
1940	Feb. 27, 1940	9.40	6,040	1945	Mar. 16, 1945	11.18	8,380

5080. Verde River below East Verde River, near Pine, Ariz.

Location.--Lat $34^{\circ}16^{\circ}$, long $111^{\circ}41^{\circ}$, in sec.30, T.11 N., R.7 E. (unsurveyed), $2\frac{1}{2}$ miles downstream from East Verde River and 15 miles southwest of Pine.

Drainage area, -- 5,623 sq mi.

Gage .-- Recording. Datum of gage is 2,401.6 ft above mean sea level, datum of T929.

Stage-discharge relation.--Defined by current-meter measurements below 27,000 cfs and extended above on basis of slope-area measurement at gage height 24.7 ft.

 $\frac{\text{Remarks.--Peak discharge unaffected by irrigation diversions or powerplant.}}{\text{Base for partial-duration series, 5,000 cfs.}}$

	Peak stages and discharges										
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)				
1934	July 17, 1934	9.45	3,400	1939	Sept. 7, 1939 Sept. 13, 1939	11.98 13.90	10,700 19,300				
1935	Feb. 7, 1935 Mar. 15, 1935 Apr. 9, 1935	11.60 10.80 11.76	10,400 7,460 10,500	1940	Feb. 27, 1940 Aug. 4, 1940	10.42 10.83	5,290 6,630				
1936	Feb. 24, 1936	11.74	11,000	1941	Oct. 5, 1940 Dec. 12, 1940 Dec. 25, 1940	12.27 10.46 13.54	11,900 5,570 18,900				
1937	Feb. 7, 1937 Feb. 15, 1937 Mar. 14, 1937 Mar. 16, 1937	20.6 15.25 11.71 15.32	68,600 29,600 11,500 30,000		Dec. 31, 1940 Feb. 16, 1941 Feb. 21, 1941 Feb. 25, 1941 Mar. 2, 1941	10.63 10.30 13.30 11.50 14.04	6,670 5,630 17,900 9,700 21,600				
1938	Feb. 28, 1938 Mar. 3, 1938 Mar. 13, 1938 Aug. 13, 1938	12.26 24.7 11.01 11.24	13,700 110,000 7,110 7,950		Mar. 14, 1941 Apr. 2, 1941 Apr. 13, 1941 Apr. 16, 1941	18.2 10.83 13.12 13.32	49,700 7,840 17,400 18,400				

5085. Verde River below Tangle Creek, above Horseshoe Dam, Ariz. (Published as "above Camp Creek, near McDowell" 1925-38, and as "above Bartlett Reservoir, near Cave Creek" 1939-45)

Location. --Lat 34°04'25", long ll1°42'50", in sec.35, T.9 N., R.6 E. (unsurveyed), in Tonto National Forest, 1^{+}_{π} miles downstream from Tangle Creek and 9 miles upstream from Horseshoe Dam.

 $\frac{\text{Drainage area.--6,650 sq mi, approximately, prior to 1925; 6,210 sq mi 1925-38;}{6,065 sq mi 1939-45; 5,872 sq mi since 1945 (all areas include 373 sq mi in Aubrey Valley Playa, closed basin).}$

Gage .-- This is a combined record from the following gages: Nonrecording prior to 1925 at several sites from 0.7 to 1.4 miles above mouth; recording prior to 1925 at several sites from 0.7 to 1.4 miles above mouth; recording 1925-38 at two different sites, 500 ft and a half a mile, respectively, above Camp Creek, at different datums; recording 1939-45 at site 4.5 miles downstream from Horseshoe Dam at datum 1,829.5 ft above mean sea level, datum of 1929; recording since August 1945 at present site and datum. Datum of gage is 2,029.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--1925-38: Defined by current-meter measurements below 45,000 cfs and estimated above on basis of basin-wide runoff studies and slope-area measurement at gage height 21.9 ft.

1939-45: Defined by current-meter measurements. 1946-62: Defined by current-meter measurements below 42,000 cfs and extended above by logarithmic plotting.

Historical data.--Flood of Feb. 24, 1891, is greatest known since 1888; record furnished by Arizona Canal Company.

Remarks. -- Computation of peaks 1905, 1925-33, was made from records furnished by Salt River Valley Water Users' Association. Peak discharges unaffected by irrigation diversions. Base for partial-duration series, 4,000 cfs. Only annual peaks are shown prior to 1933.

Peak stages and discharges of Verde River below Tangle Creek, above Horseshoe Dam, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	Feb. 24, 1891	-	(a)	1945	Apr. 3, 1945	8.02	4,060
1906	Nov. 27, 1905	-	96,000	1946	Apr. 8, 1946	9.90	8,660
1925	Sept.17, 1925	-	ъ20,000	1947	Dec. 28, 1946 Sept.19, 1947	8.62 11.47	6,110 11,500
1926 1927 1928	Apr. 6, 1926 Feb. 17, 1927 Feb. 5, 1928	10.2 17.0 7.37	32,000 70,000 14,000	1948	Mar. 25, 1948	6.45	2,560
1929 1930	Apr. 5, 1929 Aug. 9, 1930	12.5 7.8	26,000 8,100	1949	Jan. 13, 1949 Feb. 25, 1949	11.24 7.82	11,000 4,140
1931 1932	Feb. 14, 1931 Feb. 9, 1932	10.65 15.0	34,000 53,000		Mar. 8, 1949 Mar. 20, 1949 Apr. 9, 1949 Sept.10, 1949	8.37 8.65 8.07 7.77	4,900 5,260 4,480 4,040
1933	Mar. 13, 1933	4.0	1,660	1050			
1934	Aug. 25, 1934	7,30	3,300	1950	Oct. 19, 1949 Feb. 8, 1950	10.50 8.96	9,330 5,620
1935	Jan. 12, 1935	9.32 8.40	7,380 4,790	1951	Aug. 30, 1951	12.40	16,400
	Jan. 16, 1935 Feb. 7, 1935 Feb. 15, 1935 Mar. 3, 1935 Mar. 15, 1935	11.56 8.40 8.60 9.88	14,300 5,030 5,130 7,680	1952	Dec. 31, 1951 Jan. 18, 1952 Apr. 1, 1952 Aug. 15, 1952	17.62 13.86 10.33 8.87	81,600 27,800 7,960 5,550
	Apr. 9, 1935 Aug. 15, 1935	10.81 9.09	11,800 5,870	1953	Aug. 29, 1953	10.00	6,390
1936	Feb. 24, 1936	10.89	12,000	1954	Mar. 23, 1954 Mar. 30, 1954	13.59 9.61	19,700 6,310
1937	Feb. 7, 1937 Feb. 15, 1937 Mar. 14, 1937 Mar. 17, 1937	18.8 14.66 11.27 15.03	63,000 30,400 12,400 32,300	1955	Aug. 5, 1954 June 14, 1955 July 23, 1955	8.90 8.63 7.83	5,080 5,000 4, 010
1938	Mar. 4, 1938 Mar. 13, 1938	21.9 9.81	95,000 5,940		July 26, 1955 Aug. 19, 1955 Aug. 23, 1955	8.33 9.15 11.67	4,610 5,720 11,600
1939	Sept. 7, 1939 Sept.14, 1939	11.42 13.92	9,500 17,700	1956	July 31, 1 9 56	12.00	12,800
1940	Feb. 3, 1940 Feb. 27, 1940	8.36 8.62	4,740 5,020	1957	Jan. 10, 1957 Jan. 27, 1957 Feb. 14, 1957 Feb. 20, 1957	12.45 11.90 8.74 8.29	14,500 12,400 4,990 4,500
1941	Oct. 6, 1940 Dec. 13, 1940 Dec. 18, 1940	12.36 9.23 7.93	11,800 5,900 4,210	1050	Feb. 25, 1957	11.24	10,300
	Dec. 25, 1940 Dec. 31, 1940 Feb. 22, 1941 Mar. 2, 1941 Mar. 14, 1941 Apr. 3, 1941 Apr. 13, 1941	14.34 11.13 13.23 14.47 17.85 10.28 14.14	19,600 10,400 16,000 23,400 43,800 8,460 22,300	1958	Nov. 4, 1957 Feb. 5, 1958 Feb. 26, 1958 Mar. 18, 1958 Mar. 23, 1958 June 21, 1958 Sept.13, 1958	12.77 9.15 10.05 10.95 14.30 8.47 11.46	13,000 4,600 5,750 8,080 21,100 4,320 9,160
1048	May 4, 1941	8.17	4,180	1959	Aug. 5, 1959 Aug. 17, 1959	9.32 9.91	5,210 6,060
1942	Oct. 14, 1941	8.00	3,510	1960	Oct. 29, 1959	14.04	19,200
1943	Mar. 5, 1943 Mar. 11, 1943 Aug. 14, 1943	12.44 9.56 12.98	13,100 6,520 16,600		Dec. 26, 1959 Jan. 12, 1960 Mar. 10, 1960	14.57 10.14 8.62	23,400 6,420 4,880
1944	Feb. 25, 1944 Mar. 14, 1944	8.47 10.33	4,670 7,530	1961	Aug. 23, 1961	6.88	2,800
	Mar. 26, 1944 Apr. 3, 1944 Apr. 14, 1944	8.82 8.10 8.43	5,030 4,120 4,720	1962	Feb. 13, 1962 Mar. 29, 1962	12.71 9.02	13,300 4,870
1945	Mar. 16, 1945	11.12	9,710				

a Probably exceeded 150,000 cfs. b Estimated.

5125. Agua Fria River near Mayer, Ariz.

Location. --Lat 34°19', long 112°04', in NW¹₄SE¹₄ sec.20, T.11 N., R.3 E., at Sycamore damsite, 700 ft downstream from Bigbug Creek and 12 miles southeast of Mayer.

Drainage area .-- 588 sq mi.

<u>Gage</u>.--Nonrecording Jan. 24 to Feb. 14, 1940; recording thereafter. Altitude of gage is 3,434 ft (levels by Maricopa County Municipal Water Conservation District No. 1).

Stage-discharge relation.--Defined by current-meter measurements below 5,600 cfs and extended above on basis of slope-area measurements at gage heights 9.3, 9.44, and 11.97 ft.

 $\frac{Remarks. -- Peak}{gation.}$ Base for partial-duration series, 1,300 cfs.

	Peak stages and discharges							
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)	
1940	Feb. 2, 1940 June 26, 1940 Aug. 18, 1940	5.7 8.80 7.27	1,820 5,920 3,620	1952	Aug. 16, 1952 Aug. 24, 1952	5.35 5.50	2,320 2,510	
1941	Sept. 2, 1940 Oct. 5, 1940	8.55 5.78	5,500 1,900	1953	July 8, 1953 July 26, 1953 Aug. 28, 1953	7.23 5.37 5.02	5,510 2,510 1,880	
	Dec. 24, 1940 Dec. 30, 1940 Mar. 1, 1941 Mar. 14, 1941 Apr. 13, 1941 July 18, 1941	9.30 5.59 11.97 9.43 7.92	6,830 1,810 13,000 7,080 4,510	1954	July 22, 1954 Aug. 4, 1954 Aug. 5, 1954 Sept. 1, 1954	4.85 5.76 6.14 5.55	1,320 2,380 2,910 2,100	
	July 18, 1941 July 24, 1941 Aug. 8, 1941 Sept.17, 1941	5.85 5.08 5.39 5.14	2,010 1,380 1,650 6,430	1955	Sept. 3, 1954 Sept.24, 1954 June 13, 1955	7.22 5.11 5.88	4,570 1,590 2,620	
1942	Oct. 20, 1941 July 25, 1942 Aug. 4, 1942 Aug. 6, 1942	6.00 5.08 6.37 9.0	2,190 1,380 2,560 6,280		July 15, 1955 July 17, 1955 July 23, 1955 July 31, 1955 Aug. 3, 1955	5.45 6.10 9.25 7.79 12.00 7.63	1,980 2,850 7,820 5,480 12,800 5,230	
1943	Aug. 9, 1943 Aug. 15, 1943 Sept.25, 1943	4.79 4.78 6.70	1,340 1,330 3,500		Aug. 7, 1955 Aug. 8, 1955 Aug. 9, 1955 Aug. 12, 1955 Aug. 14, 1955	6.80 5.80 4.86 5.40	3,920 2,520 1,450	
1944	Feb. 24, 1944 Aug. 19, 1944 Sept.14, 1944 Sept.16, 1944 Sept.26, 1944	6.11 5.92 5.78 7.3 5.08	2,320 2,280 2,140 3,810 1,500		Aug. 14, 1955 Aug. 21, 1955 Aug. 22, 1955 Aug. 22, 1955 Aug. 23, 1955 Aug. 25, 1955	5.63 8.60 6.56 8.95 8.00	2,040 2,310 6,780 3,650 7,340 5,820	
1945	July 27, 1945 Aug. 10, 1945	6.26 6.10	2,620 2,460	1956	June 30, 1956 July 11, 1956 July 25, 1956	5.38 6.47 9.15	1,550 2,840 6,880	
1946	July 22, 1946 Aug. 10, 1946 Aug. 14, 1946 Aug. 15, 1946	8.2 5.53 6.26 5.76	4,930 1,570 2,350 1,800	1957	July 30, 1956 Aug. 17, 1956 Jan. 27, 1957	6.10 5.20 5.28	2,370 1,370 1,420	
1947	Aug. 30, 1946 Aug. 16, 1947 Aug. 31, 1947	7.0 5.57 5.38	3,230 1,610 1,430		July 6, 1957 July 26, 1957 Aug. 11, 1957 Aug. 13, 1957	5.75 6.05 6.18 6.37	1,900 2,310 2,410 2,710	
1948	Aug. 4, 1948 Aug. 6, 1948	9.30 7.15	6,830 3,490	1958	Feb. 4, 1958 June 21, 1958	5.77 7.72	1,880 4,620	
1949	Jan. 13, 1949	6.37	2,460		Aug. 20, 1958 Sept.12, 1958	5.71 6.94 5.21	1,790 3,490 1,380	
1950	Oct. 18, 1949 July 17, 1950 July 30, 1950	5.66 6.10 5.88	1,690 2,170 1,950		Sep+ 27, 1958 Sept.28, 1958 Sept.28, 1958	6.28 5.95	2,530 2,070	
1951	July 31, 1951 Aug. 19, 1951 Aug. 28, 1951 Aug. 28, 1951 Sept. 7, 1951	6.86 9.23 9.70 9.65 7.16	3,040 6,230 8,180 8,010 4,380	1959	July 5, 1959 July 12, 1959 July 18, 1959 July 26, 1959 July 27, 1959 Aug. 1, 1959	5.19 6.50 5.38 8.57 5.85 7.90	1,310 2,880 1,450 5,910 2,070 4,890	
1952	Oct. 1, 1951 Oct. 30, 1951 Dec. 30, 1951 Jan. 18, 1952	5.70 7.38 5.20 8.85	2,770 5,260 2,140 7,500		Aug. 4, 1959 Aug. 11, 1959 Aug. 13, 1959 Aug. 24, 1959	10.78 9.91 9.50 6.08	9,700 8,170 7,470 2,350	
	Mar. 11, 1952	5.78	2,900	1960	Dec. 25, 1959	6.88	3,400	

Peak stages and discharges of Agua Fria River near Mayer, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1960	Aug. 8, 1960 Aug. 22, 1960 Sept. 1, 1960	7.85 5.85 5.23	4,820 2,070 1,400	1961	July 28, 1961 Aug. 1, 1961 Aug. 8, 1961 Sept.13, 1961	6.15 5.75 5.10 6.20	2,560 2,070 1,320 2,620
1961	Oct. 9, 1960 July 14, 1961 July 16, 1961 July 22, 1961	6.50 5.29 6.33 11.05	2,880 1,460 2,660 10,200	1962	Sept.17, 1961 Sept.13, 1962	11.00	10,100 2,470

5145. Hassayampa River near Wagoner, Ariz.

Location. --Lat 34°18', long 112°34', in $NE_{\pi}^{1}SE_{\pi}^{1}$ sec. 9, T.11 N., R.3 W., at bridge on Kirkland Junction-Wagoner road, $5\frac{1}{2}$ miles upstream from Milk Creek and $7\frac{1}{2}$ miles upstream from Wagoner.

Drainage area.--78.7 sq mi.

Gage .-- Recording. Datum of gage is 3,741.51 ft above mean sea level, unadjusted.

Stage-discharge relation. --Defined by current-meter measurements below 500 cfs and extended above. Relation subject to very large shifts and of questionable accuracy.

Historical data. -- Failure of the Walnut Grove Dam 9 miles downstream on Feb. 22, 1890, resulted in a catastrophic flood in which 76 persons lost their lives. This dam failure followed a period of high runoff from melting snow. Flood discharge is not known. (See Thirteenth Annual Report of the Geological Survey, 1891-92, Part III, Irrigation, for detailed discussion of this flood.)

Remarks. -- Peak discharges unaffected by small irrigation diversions. Base for partial-duration series, 160 cfs.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1940	Sept. 6, 1940	3.4	171	1942	Aug. 15, 1942	5.00	1,250
1941	Oct. 5, 1940 Feb. 21, 1941 Feb. 24, 1941	2.97 2.9 3.5	214 850 1,250	1943	Aug. 3, 1943 Aug. 9, 1943	4.55 5.10	945 1,470
	Mar. 2, 1941 Mar. 8, 1941	5.11 4.33	1,250 343	1944	Sept.27, 1944	3.43	138
	Mar. 14, 1941 Apr. 16, 1941 Apr. 24, 1941 Aug. 9, 1941 Aug. 29, 1941	4.37 3.1 3.93 3.68 3.78	498 1,700 221 162 297	1945	Mar. 16, 1945 Aug. 9, 1945 Aug. 11, 1945 Aug. 23, 1945	3.54 5.13 4.82 4.42	291 1,480 1,160 782
1942	July 17, 1942	3.81	323	1946	Aug. 10, 1946 Sept.27, 1946	4.35 3.70	6 4 8 259

5155. Hassayampa River at Box damsite, near Wickenburg, Ariz.

Location.--Lat 34°02'35", long 112°42'35", in SE_u^1 sec.7, T.8 N., R.4 W. (unsurveyed), at Box damsite, $7\frac{1}{2}$ miles upstream from Wickenburg.

Drainage area .-- 417 sq mi.

Gage.--Recording. At site 1 mile downstream at datum 23.76 ft lower January to June 1938. At present site at datum 2.16 ft higher May 1, 1946, to Nov. 17, 1949. Datum of gage is 2,236.12 ft above mean sea level, datum of 1929. All gage heights referenced to present site and datum.

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs and extended above on basis of slope-area measurements at gage heights 9.16 and 18.3 ft.

<u>Historical data.</u>—Records obtanined by W. A. Farish, engineer for Joseph Wittman, show high magnitude floods on Sept.19, 1925 (25,500 cfs), Feb. 16, 1927 (27,100 cfs), and Feb. 7, 1937 (22,000 cfs). Basis for these discharge figures is not known and they are not included in the listing below.

Remarks.--Peak discharges unaffected by small diversions for mining and irrigation. Base for partial-duration series, 500 cfs.

	Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1938	Mar. 3, 1938	10.65	al0,000	1955	Aug. 2, 1955 Aug. 10, 1955	4.85 7.22	518 3,350		
1946	July 22, 1946	5.88	664	1	Aug. 14, 1955	5.60	1,070		
-010	Aug. 11, 1946	7.0	1,710	ĮĮ.	Aug. 21, 1955	8.84	6,710		
	Aug. 14, 1946	6.41	1,110		Aug. 23, 1955 Aug. 25, 1955	9.80 4.50	8,820 615		
1947	Aug. 8, 1947	7.41	2,300	1956	Oct. 4, 1955	5.14	792		
1948	Aug. 5, 1948	9.16	5,600	1000	July 25, 1956 Aug. 18, 1956	5.10 5.70	685 1,210		
1949	Jan. 13, 1949	5.26	651	1			_		
	Jan. 25, 1949	5.36	708	1957	Jan. 27, 1957	5.95	1,300		
	July 4, 1949	7.40	2,510	1	Aug. 10, 1957	6.34	1,980		
	Sept.11, 1949	6.21	1,310		Aug. 12, 1957	5.77	947		
	Sept.14, 1949	5.76	970	1958	Oct. 21, 1957	5.60	556		
	Sept.26, 1949	7.71	2,910	1950	Nov. 1, 1957	6.25	1,320		
1950	Oct. 18, 1949	9.01	5,500	1	Nov. 3, 1957	5.90	935		
1000	000. 10, 1010	0.01	0,000		Feb. 4, 1958	6.60	1,580		
1951	Aug. 3, 1951	6.05	2,130		Aug. 14, 1958	7.95	1,420		
	Aug. 20, 1951	4.80	750	1	Aug. 15, 1958	7.10	800		
	Aug. 26, 1951	7.7	4,910	l	Aug. 20, 1958	7.21	768		
	Aug. 29, 1951	18.3	27,000		Aug. 28, 1958 Sept. 5, 1958	7.58 11.8	1,560 10,600		
1952	Oct. 30, 1951	3.70	885		Sept. 12, 1958	7.68	3,450		
1000	Dec. 30, 1951	4.50	1,590	1	Septita, 1000		-,		
	Jan. 18, 1952	3.50	590	1959	Aug. 2, 1959	6.27	1,240		
	Mar. 11, 1952	5.35	1,410		Aug. 11, 1959	7.41	2,030		
	Mar. 17, 1952	4.90	910		Aug. 21, 1959	6.28	1,100		
	Aug. 14, 1952	6.05	775		Aug. 24, 1959	9.12	5,110		
	Sept.20, 1952	5.70	580	1960	Dec. 26, 1959	7.49	3,210		
1953	July 18, 1953	5.95	865	1960	Aug. 10, 1960	6.15	1,120		
1333	July 10, 1355	5.35	005		Aug. 23, 1960	7.15	2,780		
1954	Mar. 23, 1954	6.64	3,090		Sept. 2, 1960	5.94	926		
	Mar. 25, 1954	5.04	1,120						
	Sept. 2, 1954	7.63	2,760	1961	Aug. 15, 1961	6.24	528		
		_		Į.	Aug. 19, 1961	6.88	1,150		
1955	June 13, 1955	6.17	1,340	1	Aug. 30, 1961	6.85	845		
	July 21, 1955	6.90	2,380	ļ	Sept.17, 1961	6.52	514		
	July 23, 1955 July 24, 1955	9.81 5.04	8,840 643	1962	Sept.21, 1962	7,94	1,510		
	July 31, 1955	6.58	2,310	1302	Sept. 21, 1302	1.54	1,510		
	July 01, 1000	0.00	2,510	L					

a Annual peak only.

5165. Hassayampa River near Morristown, Ariz.

<u>Location</u>.--Lat 33°53', long 112°39', in $SE^{1}_{\overline{4}}$ sec.3, T.6 N., R.4 W., 600 ft downstream from San Domingo Wash, 900 ft upstream from railroad bridge, and 3.0 miles northwest of Morristown.

Drainage area .-- 774 sq mi.

 $\frac{\text{Gage.--Recording.}}{1929}$. Datum of gage is 1,831.16 ft above mean sea level, datum of

Stage-discharge relation.--Defined by current-meter measurements below 1,600 cfs and extended above on basis of slope-area measurement at gage height 8.36 ft.

Remarks.--Peak discharges unaffected by small diversions for mining and irrigation. Base for partial-duration series 1,100 cfs.

	Peak stages and discharges								
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)		
1939	Dec. 20, 1938 Sept. 4, 1939 Sept. 6, 1939 Sept.12, 1939	7.30 6.6 8.7 6.55	2,700 1,240 6,200 1,600	1942 1943	Aug. 5, 1942 Aug. 3, 1943 Aug. 14, 1943 Sept.26, 1943	5.7 9.9 8.52 6.80	7,700 3,800 1,200		
1940 1941	Feb. 1, 1940 Oct. 5, 1940 Dec. 24, 1940 Feb. 25, 1941	5.9 7.18 7.30 6.96	2,460 3,350 2,600	1944	Oct. 18, 1943 Feb. 24, 1944 Aug. 9, 1944	7.68 7.22 8.10	2,420 1,510 3,520		
	Mar. 2, 1941 Mar. 5, 1941 Mar. 14, 1941 Apr. 11, 1941 Apr. 15, 1941	8.36 6.66 7.90 7.57 7.05	6,100 2,040 4,060 3,020 1,320	1945 1946	Aug. 2, 1945 Aug. 10, 1945 July 22, 1946 Aug. 11, 1946	7.55 6.98 7.38 7.50	2,200 1,110 1,510 2,090		
	July 24, 1941 Aug. 9, 1941 Aug. 29, 1941	7.50 7.73 7.27	2,110 3,460 2,050	1947	Sept.17, 1946 Aug. 8, 1947	7.60 8.95	2,310 6,000		

5195. Gila River below Gillespie Dam, Ariz. (Published as "at Gillespie Dam" prior to 1939)

Location.--Lat 33°13'45", long 112°46'00", in SE¹₄NE¹₄ sec.28, T.2 S., R.5 W., at Gillespie Dam, 8 miles downstream from Hassayampa River. Gila Bend Canal diverts at left side and Enterprise Canal at right side of Gillespie

Drainage area. -- 49,650 sq mi.

Gage.--Nonrecording prior to July 28, 1924; recording thereafter. At different datum prior to Nov. 11, 1924; at datum 10.00 ft higher Nov. 11, 1924, to July 22, 1932; at datum 5.00 ft higher July 23, 1932, to Apr. 27, 1955, and at present datum thereafter. Datum of gage is 753.46 ft above mean sea level, datum of 1929, which is 10.00 ft below average elevation of crest of dam.

Stage-discharge relation. -- Defined by current-meter measurements below 56,000 cfs and extended above on basis of computation of peak flow over dam. Relation affected by operation of sluice and diversion gates at dam.

<u>Historical data.</u>--Greatest known flood occurred in February 1891 (estimated discharge, 250,000 cfs).

Remarks. --Flood record shown is that for uncontrolled areas below major cams.

Records include flow over crest and through sluice gates of Gillespie Dam, but do not include flow in Gila Bend and Enterprise Canals, which divert from river immediately above dam. Other large diversions above station for irrigation, municipal, and industrial use. Flow of Gila River and tributaries above this station is regulated by San Carlos Reservoir on Gila River (capacity, 1,205,000 acre-ft), by a series of reservoirs on Salt River (capacity, 1,755,000 acre-ft), by Bartlett and Horseshoe Reservoirs or Verde River (capacity, 32,300 acre-ft), and by Lake Pleasant on Agua Fria Piver (capacity, 163,800 acre-ft). Base for partial-duration series, 2,000 cfs, 1925-38; 1,000 cfs, 1939-62. Only annual peaks are shown prior to 1925.

Peak stages and discharges of Gila River below Gillespie Dam, Ariz.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1891	February 1891	-	a250,000	1937	Mar. 19, 1937	7.77	21,300
1921	Aug. 22, 1921	3.25	26,800	1938	Mar. 5, 1938	9.95	60,000
1922	Jan. 4, 1922	3.67	32,700	1939	Aug. 10, 1939	5.70	2,200
1923	Sept.20, 1923	2.00	13,100		Sept. 5, 1939 Sept.13, 1939	2.43 5.97	2,500 3,2 4 0
1924	Dec. 28, 1923	6.00	85,000	1940	Aug. 19, 1940	5.87	2,620
1925	Sept. 2, 1925 Sept. 6, 1925 Sept. 20, 1925	.68 1.73 2.23	2,500 9,570 15,200	1941	Jan. 4, 1941 Feb. 10, 1941 Feb. 16, 1941 Feb. 19, 1941	6.16 5.68 5.44 5.65	5,850 1,910 1,040 1,800
1926	Oct. 6, 1925 Dec. 4, 1925 Mar. 31, 1926 Apr. 8, 1926 Apr. 21, 1926 July 27, 1926 Sept. 9, 1926 Sept. 30, 1926	1.28 .72 .88 3.15 1.02 .87 1.05 3.95	6,160 2,700 4,060 26,700 4,760 3,520 4,620 38,300		Feb. 24, 1941 Feb. 28, 1941 Mar. 5, 1941 Mar. 16, 1941 Apr. 5, 1941 Apr. 18, 1941 May 5, 1941 Aug. 12, 1941	6.57 6.70 7.07 9.45 5.95 8.08 7.05 5.43	7,180 7,250 10,800 45,800 3,060 25,300 10,600 1,010
1927	Dec. 8, 1926 Dec. 15, 1926	1.84	10,600	1942	Dec. 13, 1941	5.30	580
	Feb. 18, 1927 Mar. 12, 1927	.68 5.45 1.04	2,500 67,300 4,560	1943	Aug. 5, 1943	5.75	2,200
	Mar. 17, 1927 Sept.13, 1927	.81 3.71	3,160 34,900	1944	Feb. 25, 1944	5.29	580
1928	Feb. 6, 1928	1.70	9,220	1945	Aug. 14, 1945	5.53	1,350
	Aug. 3, 1928 Aug. 29, 1928	1.26 .70	5,600 2,350	1946	Sept.19, 1946 Sept.24, 1946	5.85 5.92	4,290 2,880
1929	Apr. 6, 1929 Aug. 18, 1929	2.74 .60	20,700 2,050	1947	Aug. 9, 1947	5.63	4,390
	Sept. 5, 1929 Sept. 26, 1929	.88 1.15	3,680 5,210	1948	Aug. 9, 1948	5.23	330
1930	Mar. 19, 1930	.82	3,160	1949	Aug. 7, 1949	5.42	976
	Aug. 10, 1930	2.19	13,900	1950	Oct. 19, 1949	5.56	1,460
1931	Feb. 16, 1931 Aug. 6, 1931 Aug. 12, 1931 Aug. 31, 1931	2.50 1.20 1.45 1.41	17,500 5,470 7,530 6,930	1951	July 28, 1951 Aug. 4, 1951 Aug. 28, 1951	- 5.96 7.55	2,340 2,880 16,600
1932	Oct. 3, 1931	.73	2,360	1952	Jan. 22, 1952	5.23	430
	Dec. 11, 1931 Feb. 11, 1932	1.00 4.47	3,690 44,500	1953	Nov. 20, 1952	5.10	115
	Feb. 20, 1932 Mar. 3, 1932	1.78 1.65	9,670 8,260	1954	Aug. 12, 1954	5.64	1,760
	Mar. 12, 1932 Mar. 22, 1932	.67 .92	2,090 3,270	1955	July 25, 1955 Aug. 8, 1955 Aug. 14, 1955	10.56 10.78 11.05	1,870 2,240 3,420
1933	Oct. 9, 1932	5.70	2,180		Aug. 14, 1955 Aug. 28, 1955	10.82	3,660
1934	Aug. 30, 1934	5.88	3,100	1956	-	-	0
1935	Feb. 10, 1935 Feb. 17, 1935	6.60 5.73	7,470 2,240	1957	Jan. 29, 1957	10.14	205
	Mar. 17, 1935 Aug. 25, 1935	6.06 5.84	3,890 2,380	1958	Sept.13, 1958	10.48	976
1070	Sept. 1, 1935	5.71	2,140	1959	Aug. 17, 1959	10.22	480
1936	July 29, 1936	5.90	3,240	1960	Jan. 19, 1960	10.31	640
1937	Feb. 9, 1937 Feb. 17, 1937	8.48 7.67	45,800 18,400	1961	July 23, 1961	10.21	380
	Mar. 16, 1937	6.00	4,520	1962	-		0

a Estimated.

5205. Gila River near Dome, Ariz.

Location. --Lat 32°45'40", long 114°25'10", in $SW_{4}^{\frac{1}{4}}$ sec.4, T.8 S., R.21 W., 440 ft upstream from bridge on Yuma-Quartzite highway, 3 miles west of Dome, and 12 miles upstream from mouth.

<u>Drainage area.--58,100 sq mi, approximately (including 373 sq mi in Aubrey Valley Playa, a closed basin).</u>

Gage.--Nonrecording 4 miles upstream, Oct. 15, 1903. to Dec. 31, 1906, with numerous supplementary staff gages following radical changes in channel in 1905 and 1906. Datum of principal gage is 158.37 ft above mean sea level, adjustment of 1912. 1907-28, no gage; estimates of discharge within the 20-mile reach upstream from mouth, between Dome and Yuma. Recording since May 1929. Datum of gage is 148.18 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements since 1929.
Relation subject to large shifts.

Historical data.--Flood of Jan. 22, 1916 (estimated daily mean discharge, 200,000 cfs) was probably the greatest flood cince Feb. 26, 1891, when a greater discharge may have occurred.

Remarks.--This tabulation is of annual floods only. Prior to 1929, maximum daily mean discharges are the only figures available, but on the large floods they are probably close to the instantaneous maxima. Many of those figures were estimated from record of Coloredo River at Yuma and scattered observations of floodflows and therefore are considered as rough estimates only. Flood record increasingly affected by diversions, and after comppletion of Roosevelt Dam on Salt River in 1911, by storage in major reservoirs. See record for Gila River below Gillespie Dam for details.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904 1905	Aug. 30, 1904 Mar. 20, 1905	-	4,560 95,000	1933 1934 1935	Oct. 10, 1932 Aug. 5, 1934 Feb. 16, 1935	3.90 3.44 5.35	770 200 757
1906	Nov. 29, 1905	-	95,000	1	100. 20, 2000	3.00	
1907	Mar. 7, 1907		50,000	1936	-	-	0
1908	Feb. 7, 1908	-	37,500	1937	Mar. 24, 1937	12.68	8,530
1909	Dec. 19, 1908	-	62,500	1938	Mar. 10, 1938	12.92	8,670
1910	Jan. 5, 1910	-	45,000	1939	Sept.13, 1939	7.47	905
1011	T. 15 D. 4			1940	-	-	0
1911	Jan.15,Feb. 6,	_	10,000	3043	4 00 3043	17.07	14 000
1912	Mar.10,1911 Mar.15,16,1912	_	10,000	1941 1942	Apr. 22, 1941	13.93	14,000
1913	Mar. 16, 1913	1 [2,500	1942	_	_	l
1914	Feb.22-27, 1914	_	8,000	1944	_	_	
1915	Feb. 3, 1915	_	80,000	1945		_	Ĭ
	100. 0, 2020		00,000	1 1010			Ĭ
1916	Jan. 22, 1916	-	200,000	1946	ĺ <u>-</u>	- 1	0
1917	Apr. 20, 1917	-	40,000	1947	Aug. 9, 1947	5.25	380
1918	Mar. 16, 1918	-	30,900	1948		-	0
1919	Aug. 6, 1919	-	3,000	1949	-	- '	0
1920	Feb. 25, 1920	-	95,000	1950	-	-	0
1921	Aug. 24, 1921	_	25,000	1951	Sept. 7, 1951	7.94	1,100
1922	Jan. 6, 1922	-	36,800	1952	Oct. 30, 1951	5.24	293
1923	Sept.21, 1923	-	8,000	1953	Sept.17, 1953	4.36	47
1924	Dec. 30, 1923	-	46,500	1954	Sept. 3, 1954	4.33	56
1925	Sept.22, 1925	-	6,500	1955	Aug. 17, 1955	9.62	1,070
1926	Apr. 11, 1926	_	20,000	1956	Oct. 12, 1955	4.99	86
1927	Feb. 21, 1927	_	61,000	1957	Aug. 29, 1957	4.70	66
1928	Feb. 9, 1928	_	1,400	1958	July 31, 1958	8.63	719
1929	Apr. 9, 1929	-	a1,500	1959	Aug. 8, 1959	9.45	802
1930	Aug. 14, 1930	10.50	3,600	1960	Sept. 1, 1960	12.12	2,130
	- '		-	1	,		.,
1931	Feb. 19, 1931	13.78	11,400	1961	Aug. 3, 1961	5.93	168
1932	Feb. 15, 1932	16.75	20,700	1962	Aug. 28, 1962	5.18	100

a Estimated

Note. -- Maximum daily mean discharges are shown prior to 1929.

5210. Colorado River at Yuma, Ariz.

Location. --Lat 32°43'45", long 114°37'15", in NW 101 sec. 35, T.16 S., R.22 E.,
San Bernardino meridian, 1,800 ft downstream from highway bridge at Yuma, half a mile upstream from Yuma Main Canal wasteway, 5 miles downstream from Gila River, 7 miles upstream from boundary between California and Mexico, and 19 miles downstream from Imperial Dam.

Drainage area .-- 242,900 sq mi, approximately.

Gage. --Nonrecording prior to May 1, 1922, at several sites about 800 ft upstream on or near original railroad bridge of Southern Pacific Co. at approximately same datum. May 1, 1922, to Oct. 31, 1928, remote recording in office of Bureau of Reclamation, and Nov. 1, 1928, to Oct. 24, 1933, recording; both 800 ft upstream at same datum. Oct. 25 to Nov. 10, 1933, ronrecording 680 ft upstream, Nov. 11, 1933, to July 19, 1934, nonrecording at present present site at same datum. Recording at present site since July 20, 1934. Datum of gage is 102.32 ft above mean sea level, Yuma Project datum, or 102.86 ft, datum of 1929 (datum was 0.07 ft lower prior to earthquake of May 18, 1940). Since July 6, 1945, auxiliary recording gage 20 ft upstream at same datum used for periods of low stage or faulty record.

Stage-discharge relation.--Defined by current-meter measurements. Relation subject to large shifts.

<u>Historical data.</u>--Flood of June 27, 1884, was reported by river-boat captain to have been the highest since 1867.

Bankfull stage .-- 35.5 ft (top of levee).

Remarks. -- Peak discharges not appreciably affected by diversions and regulation on main stem prior to Feb. 1, 1935. Since that date, flow has been regulated at Hoover Dam and other points. Regulation and storage in the Gila River basin prior to 1935 probably had little effect on peak discharges at this station. Construction of levees to confine channel started about 1903. Gage-height record for 1878-1902 furnished by Southern Pacific Co. Base for partial-duration series, 40,000 cfs. Only annual peaks are shown prior to 1909 and subsequent to 1934.

			Peak stages a	na aiscn	arges		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1878	June 24, 1878	23.0	_	1909	June 24, 1909	-	150,000
1879	May 12, 1879	20.0			July 31, 1909	_	53,500
1880	May 31, 1880	24.0	_	il	Aug. 24, 1909	_	54,800
1000	May 51, 1000	24.0	1))	Sept. 4, 1909	_	69,000
1881	June 14, 1881	23.5	_	1	Sept.13, 1909	_	94,000
1882	June 18, 1882	22.6	_	l	Bep0.10, 1100		,
1883	July 3, 1883	24.5	_	1910	Jan. 5, 1910	23.3	72,800
		28.5	-	1310	Mar. 15, 1910	20.45	41,000
1884	June 27, 1884		_	Į.	Apr. 1, 1910	20.4	40,300
1885	June 13, 1885	24.7	_	1	May 7, 1910	22.95	67,700
		00.0	1	i		23.35	73,500
1886	June 6, 1886	26.8	-			23.55	71,200
1887	June 10, 1887	23.5	-	ì	June 12, 1910	23,33	11,200
1888	June 25, 1888	21.8	-			04.0	CE 200
1889	June 7, 1889	22.4	- 1	1911	May 20, 1911	24.0	65,200
1890	June 5, 1890	25.5	-	Ì	June 24, 1911	25.95	79,400
					July 30, 1911	22.85	58,100
1891	Feb. 26, 1891	33.2	-				
1892	July 3, 1892	25.5	-	1912	Oct. 14, 1911	24.3	63,000
1893	May 28, 1893	25.2	-		June 22, 1912	29.15	146,000
1894	June 14, 1894	23.7	-	1	Aug. 2, 1912	20.8	42,200
1895	Jan. 20, 1895	28.2	l - i	}			
				1913	Apr. 27, 1913	21.05	41,300
1896	Sept.30, 1896	24.5	-		June 10, 1913	22.85	63,600
1897	June 9, 1897	26.1	- 1	1			
1898	June 27, 1898	23.6	-	1914	June 15, 1914	29.05	141,000
1899	July 1, 1899	27.0	- 1		July 25, 1914	20.25	52,800
1900	June 10, 1900	26.0	_		Aug. 5, 1914	19.2	44,000
1000	dunc 10, 1000	20.0		1	,,,,,		-
1901	May 31, 1901	27.2	_	1915	Dec. 28, 1914	22.6	56,200
1902	May 26, 1902	24.5		1010	Feb. 3, 1915	26.8	102,000
1903	June 27, 1903	27.7	73,000	1	Apr. 28, 1915	22.15	48,000
		26.0	51,500	i l	May 8, 1915	24.2	69,800
1904	June 7, 1904					22.0	53,000
1905	Mar. 20, 1905	30.3	112,000		May 28, 1915 June 30, 1915	21.9	58,800
1					June 30, 1913	21.5	35,000
1906	Nov. 30, 1905	31.8	109,000	1010	7- 00 1016	34.0	250,000
1907	June 30, 1907	28.6	116,000	1916	Jan. 22, 1916		
1908	June 26, 1908	25.45	62,700		Jan. 31, 1916	30.8	182,000
					Mar. 26, 1916	25.35	75,300
1909	Dec. 19, 1908	-	74,000	1	May 24, 1916	25.1	76,800
1	Apr. 1, 1909	25.0	44,900	1	June 25, 1916	24.1	75,000
	Apr. 27, 1909	24.75	47,200	1			

Peak stages and discharges of Colorado River at Yuma, Ariz .-- Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	Oct. 18, 1916 Apr. 20, 1917 May 8, 1917	25.6 25.85 22.9	71,300 75,300 55,300	1929	Sept.13, 1929 Sept.28, 1929	22.32 23.16	41,100 43,300
	June 2, 1917 July 3, 1917	26.4 29.35	95,300 1 44, 000	1930	May 3, 1930 June 9, 1930 Aug. 16, 1930	22.71 25.16 24.48	42,400 54,500 49,400
1918	Mar. 16, 1918 July 3, 1918	22.35 23.7	52,100 9 4 ,900	1931	June 16, 1931	22.37	29,000
1919	June 6, 1919	23.3	58,100	1932	Feb. 16, 1932 June 5, 1932	26.51 28.56	58,000 90,800
1920	Nov. 30, 1919 Feb. 13, 1920	28.3 22.2	8 4,4 00 43, 000		July 7, 1932	24.99	63,200
	Feb. 25, 1920 June 8, 1920	32.0 30.7	175,000 190,000	1933	June 23, 1933	26.10	70,700
1921	June 27, 1921 Aug. 4, 1921	31.25 23.2	188,000 58,100	1934 1935	May 20, 1934 June 26, 1935	21.02	22,900 15,600
	Aug. 29, 1921	23.8	61,800	1936	Aug. 1, 1936	20.17	9,520
1922	Jan. 6, 1922 May 18, 1922	23.9 24.8	55,200 77,000	1937 1938	Feb. 10, 1937 Mar. 6, 1938	24.22 23.26	23,200 21,700
	June 10, 1922 June 21, 1922	27.4 25.4	117,000 112,000	1939 1940	Sept. 7, 1939 Jan. 16, 1940	24.57 19.48	34,900 13,800
1923	June 8, 1923 Sept.24, 1923	25.4 24.3	101,000 60,100	1941 1942	June 5, 1941 Feb. 7, 1942	22.66 20.49	30,400 31,800
1924	Dec. 30, 1923 Apr. 22, 1924 May 31, 1924	25.1 22.2 24.03	69,800 44,800 61,500	1943 1944 1945	Dec. 14, 1942 Feb. 24, 1944 Mar. 5, 1945	18.67 18.89 18.90	19,000 21,200 22,900
	June 24, 1924	24.3	66,500	1946 1947	Feb. 9, 1946 Feb. 5, 1947	17.60 16.56	16,800 14,200
1925	June 8, 1925 June 30, 1925	23.45 23.60	53,200 48,900	1948 1949 1950	Jan. 31, 1948 Jan. 13, 1949 Jan. 12, 1950	18.27 18.07 16.88	21,300 24,000 22,900
1926	May 15, 1926 June 16, 1926	25.5 25.20	59,300 73,200	1951	Apr. 5, 1951	15.57	16,100
1927	Feb. 21, 1927 May 14, 1927 June 2, 1927 July 9, 1927	29.4 25.45 27.0 27.4	92,400 59,900 76,200	1952 1953 1954 1955	Mar. 20, 1952 Feb. 12, 1953 June 1, 1954 Jan. 4, 1955	17.60 16.76 16.66 16.15	23,600 24,300 18,200 17,600
	Sept.20, 1927	26.3	78,000 73,900	1956 1957	July 7, 1956 July 8, 1957	13.48 13.00	3,970 3,390
1928	May 23, 1928 June 13, 1928	26.52 28.3	74,200 99,400	1958 1959 1960	Apr. 24, 1958 Jan. 6, 1959 Jan. 19, 1960	16.50 15.10 14.49	15,800 13,700 10,300
1929	June 7, 1929 Aug. 11, 1929 Aug. 18, 1929	27.26 23.05 22.98	91,000 56,100 52,800	1961 1962	Dec. 7, 1960 Jan. 4, 1962	13.80 12.24	8,900 2,170

WHITEWATER DRAW BASIN

5375. Whitewater Draw near Douglas, Ariz.

Location. --Lat 31°21'15", long 109°35'00", in $SW_{4}^{1}SE_{4}^{1}$ sec.10, T.24 S., R.27 E., at bridge on U.S. Highway 80, 1.5 miles upstream from international boundary and 2 miles west of Douglas.

Drainage area. -- 1,023 sq mi.

Gage.--Nonrecording at various sites within three-quarters of a mile at various datums prior to Apr. 30, 1922. Recording since June 17, 1930. Datum of gage is 3,906.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1958. At datum 0.03 ft higher prior to May 14, 1938.

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs and extended above by logarithmic plotting.

Remarks.--Peak discharges unaffected by irrigation diversions, mostly from ground water. Base for partial-duration series, 1,000 cfs.

			1012 002 01 11112	CONGCE.	Draw near Dougla		
Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916 1917	July 11, 1916 Aug. 9, 1917	9.5 7.0	al,600 a720	1945	July 31, 1945	11.16	3,100
1918 1919	July 15, 1918 July 27, 1919	8.0 14.5	al,050 ab4,050	1946	Oct. 9, 1945	9.27	1,440
	Nov. 23, 1919	13.3	a3,400		Aug. 5, 1946 Aug. 17, 1946	8.89 8.56	1,180 1,010
1930	June 21, 1930 July 23, 1930 Sept. 7, 1930	8.14 8.73	1,240 1,490	1947	July 8, 1947	9.33	al,580
		9.11	1,700	1948	July 22, 1948 July 28, 1948	11.10 9.04	3,170 1,180
1931	Aug. 5, 1931 Aug. 10, 1931	11.56 12.15	3,040 3,450		Aug. 10, 1948 Aug. 12, 1948	9.14 9.48	1,420 1,710
	Aug. 10, 1931 Aug. 30, 1931 Sept. 1, 1931	9.56 8.61	1,710 1,170		Aug. 23, 1948	8.88	1,210
1932	Oct. 1, 1931	8.86	1,430	1949	July 11, 1949 July 18, 1949	9.38 9.77	1,450 1,790
	July 29, 1932 July 31, 1932	9.09 9.5 4	1,560 1,800	1950	July 9, 1950	8.88	1,070
1933	July 16, 1933	8.36	1,180	1000	July 19, 1950 July 22, 1950	12.38 9.31	3,400
	July 23, 1933	8.10	1,060		·		1,070
	Sept.20, 1933	9.36	1,730	1951	Aug. 20, 1951	9.06	1,230
	August 1934	11.65	a3,100	1952	June 2, 1952 Aug. 17, 1952	10.48 10.34	1,670 1,660
	Aug. 28, 1935 Sept. 1, 1935	10.58 11.40	2,360 2, 900	1953	July 7, 1953	12.2	2,950
i	Sept.22, 1935	8.65	1,210		July 13, 1953 July 18, 1953	10.1 9.18	1,520 1,050
1936	Sept.11, 1936	-	ac2,000		July 26, 1953 July 31, 1953	9.90	1,420 1,420
1937	July 20, 1937 Aug. 19, 1937	8.27 10.30	1,260 2,770	1954		12.50	
	Aug. 21, 1937 Aug. 23, 1937	10.15	2,650	1304	July 19, 1954 July 23, 1954	9.95	3,210 1,290
	Sept. 6, 1937	8.48	2,690 1,420		Aug. 1, 1954 Aug. 2, 1954	10.40 12.17	1,550 2,800
	Dec. 4, 1937	8.09	1,170 1,320		Aug. 2, 1954 Aug. 6, 1954 Aug. 9, 1954	10.7 13.2	1,680 3,680
	July 20, 1938 Aug. 7, 1938	8.34 9.29	1,320 1,990		Aug. 13, 1954	9.87	1,150
ŀ	Sept. 9, 1938	7.88	1,020	1955	July 25, 1955 July 28, 1955	11.38 12.39	1,320 2,310
	July 17, 1939 Aug. 5, 1939	8.17 10.25	1,110 2,690		July 31, 1955 Aug. 7, 1955	10.90 14.66	1,180 5,060
	Sept.17, 1939	9.21	1,900		Aug. 11, 1955	10.90	1,220
1940	June 24, 1940	10.26	2,750		Aug. 21, 1955	13,22	3,220
	Aug. 13, 1940 Sept.19, 1940	9.62 8.54	2,160 1,360	1956	Aug. 27, 1956	9.41	513
1941	July 20, 1941	8.72	1,460	1957	July 24, 1957	13.24	2,720
	July 23, 1941 Sept. 7, 1941	8.52 8.12	1,280 1,010	1958	Sept.23, 1958	12.40	1,280
	Sept.29, 1941	10.27	2,750	1959	July 27, 1959 Aug. 4, 1959	14.93 12.35	2,760 1,220
1942	July 16, 1942 Sept.13, 1942	8.57 9.85	1,320 2,300		Aug. 15, 1959	12.92	1,540
			·		Aug. 17, 1959 Aug. 21, 1959	14.08 12.59	2,310 1,360
	June 30, 1943 July 15, 1943	10.34 8.53	2,750 1,180		Aug. 24, 1959	13:65	2,000
	Aug. 2, 1943 Aug. 10, 1943	9.75 10.04	2,140 2, 4 40	1960	July 31, 1960	10.92	676
1	Aug. 20, 1943 Aug. 24, 1943	9.15 9.29	1,580 1,710	1961	July 29, 1961	13.45	1,380
	Aug. 16, 1944	9.78	2,190	1962	July 28, 1962	12.49	687
	Aug. 18, 1944	9.31	1,710				

a Annual peak only.
b Might have been exceeded by flood of July 15, 1919.
c Estimated.

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	Po co.		Page	
Agricultural Research Service, Safford	Page	Black Creek, above Green Mountain Res-	_	•
watershed W-I, Arizona	406	Black Creek, above Green Mountain Reservoir, Colo	88	
Safford watershed W-II, Arizona	412	below Black Lake, near Dillon, Colo	88 98	
Safford watershed W-V, Arizona	407	Black River, below pumping plant, near	50	
Safford watershed W-IV, Arizona Safford watershed W-IV, Arizona Tombstone watershed W-I, Arizona	420	Black Gore Creek near Minturn, Colo Black River, below pumping plant, near Point of Pines, Ariz	441	
Tombstone watershed W-II, Arizona	420	near Fort Apache, Ariz	443 54	
Tombstone watershed W-II, Arizona Tombstone watershed W-III, Arizona Tombstone watershed W-IV, Arizona Tombstone watershed W-V, Arizona	411	near Fort Apache, Ariz	219	
Tombstone watershed W-V, Arizona	411	near Lyman, Wyo	217	
Agua rria kiver, at Lake Pleasant Dam,		near millourne, wyo	214 215	
near Mayer. Ariz	56 458	near Urie, Wyo	56	
near Mayer, Ariz	57	Blue River, above Green Mountain Reser-		
All-American Canal tributaries	55	voir, Colo	87 80	
Analysis of data, application of method	3-13	at Dillon, Colobelow Green Mountain Reservoir, Colo.	91	
regional.	13,26	near Kremmling, Colo	90	
special application	151	Blue River basin, records	80-91 52	
special application	57 57	Bobtail Creek near Jones Pass, Colo Boulder Creek (Blue River basin) near	32	
Animas River, above Tacoma, Colo	328	Dillon, Colo	86	
at Durango, Colo	330	Boulder Creek (Escalante River basin),	304	
at Farmington, N. Mex	335 326	near Boulder Htah	304	
at Howardsville, Colonear Cedar Hill, N. Mex	334	East Fork, near Boulder, Utah near Boulder, Utah Boulder Creek (Green River basin),		
Animas Valley, records	57	below Boulder Lake, near Boulder,	200	
Antelope Creek near Kremmling, Colo Anthracite Creek near Floresta, Colo	79 151	Myonear Boulder, WyoBrawley Wash, near Tucson, Ariz	200	
Arapaho Creek, at Monarch Lake Outlet,	101	Brawley Wash, near Tucson, Ariz	56	
Colo	62	tributary near Three Points, Ariz tributary near Tucson, Ariz	56	
below Monarch Lake, Colo	62 422	Bright Angel Creek near Grand Canyor,	56	
Aravaipa Creek near Feldman, Ariz Arches Canyon near Blanding, Utah	54	Ariz	371	
Area, description	21-23	Browns Wash, near Green River, Utah	290	
Arrovo Seco near Picacho, Gaill	375	Browns Wash, near Green River, Utah tributary near Green River, Utah Brush Creek (Eagle River basin) near	53	
Ash Creek near New Harmony, Utah Ashley Creek, at Sign of the Maine, near Vernal, Utah	0,0	Eagle, Colo	100	
near Vernal, Utah	254	Eagle, Colo	248	
below Trout Creek, near Vernal,	249	Jensen, Utahnear Vernal, Utah	246	
near Jensen, Utah	255	Brush Creek (Plateau Creek basin) near		
near Jensen, Utahnear Vernal, Utah	250	Collbran, Colo	124	
South Fork, near Vernal, Utah Atkinville Wash near St. George, Utah.	55	Buckeye Reservoir Outlet near Paradox,	174	
	00	Colo Buckhorn Draw tributary near Castle		
Babocomari River tributary near		Dale, Utah	53	
Sonoita, Ariz	115	Bull Creek, at upper station, near Molina, Colo	126	
Battle Creek, near Encampment, Wvo	238	near Moliná, Colo Burnt Fork, at Burntfork, Wyo	126	
near Slater, Colo	239	Burnt Fork, at Burntfork, Wyo near Burntfork, Wyo	223 223	
Battlement Creek near Grand Valley,	117	Buzzard Creek, below Owens Creek, near		
Beaver Creek (tributary to Colorado River) near Rifle, Colo Beaver Creek (tributary to Green		Heiberger, Colo near Collbran, Colo	122	
River) near Rifle, Colo	117	near Collbran, Colo	123 122	
River) near Daniel, Wyo	194	near neiborger, coro	100	
Beaver Creek (tributary to Henrys		Cabin Creek basin, records	94	
Fork), Middle Fork, near Lone-	221	Cainville Wash near Cainville, Utah California Wash near Glendale, Nev	53 55	
Fork), Middle Fork, near Lone- tree, Wyo	222	Canyon Creek (tributary to Colorado River) near New Castle, Colo		
West Fork, near Lonetree, Wyo Beaver Creek (tributary to San Miguel River) near Norwood, Colo	3.00	River) near New Castle, Colo	114	
River) near Norwood, Colo Reaver Creek (tributary to Verde	178	Canyon Creek (tributary to Uncompanare River) at Ouray, Colo	161	
Beaver Creek (tributary to Verde River) at Camp Verde, Ariz Benson Creek near Duchesne, Utah	56	Carrizo Creek (tributary to Little		
Benson Creek near Duchesne, Utah	53 94	Colorado River) near Salt Lake,	54	
Big Alkali Creek basin, records Big Beaver Creek near Buford, Colo	277	N. Mex	24	
Big Bonita Creek near Fort Apache,		above Corduroy Creek, near Show		
Ariz	442	Low, Ariz	446 448	
Big Creek, at upper station, near Collbran, Colo	124	near Show Low, Ariztributaries. See Cibecue tributary No. 1, No. 2, near Show Low, Ariz.	170	
near Collbran, Colo	125	No. 1, No. 2, near Show Low, Ariz.	56	
Big Sandy Creek, at Leckie Ranch, near	900	Carter Creek, at mouth, near Manila,	226	
below Eden, Wyo	209 212	near Manila, Utah	226	
near Farson, Wyo	210	near Manila, Utah		
below Eden, Wyo near Farson, Wyo Big Sandy River at Signal, Ariz Bill Williams River, at Planet, Ariz	55 388	River), above diversions, near	188	
near Alamo, Ariz	55,387	near Moab, Utah	188	
Bill Williams River basin, records. 55,3	85-388	[Castle Creek (tributary to Ohio Creek)		
Bitter Creek at Point of Rocks, Wyo	52	near Baldwin, Colo	134	
		405		

0+3- 0	Page		Page
Castle Creek (tributary to Roaring	105	Cottonwood Creek (tributary to Hunting-	
Fork) near Aspen, Colo Catamount Creek near Burns, Colo	105 94	ton Creek), near Castle Dale,	294
Cataract Creek above Green Mountain	34	Utahnear Orangavilla Utah	293
Reservoir, Colo	90	near Orangeville, Utah	200
Catron Wash near Mexican Springs,	00	Creek) near Monticello, Utah	192
N. Mex	342	Cottonwood Creek (tributary to Kiser	
Cattle Creek near Carbondale, Colo	111	Creek) near Cedaredge, Colo Cottonwood Creek (tributary to Plateau	157
Cave Creek (tributary to Salt River),		Cottonwood Creek (tributary to Plateau	
near Cave Creek, Ariz	56	Creek), at upper station, near	
near Phoenix, Ariz	56	Molina, Colo	125
Cave Creek (tributary to San Simon	400	near Molina, Colo	125
River) near Paradise, Ariz	406	Cottonwood Creek (tributary to San	180
Cebolla Creek, at Powderhorn, Colo	141 140	Miguel River) near Nucla, Colo	56
near Lake City, Colo Cement Creek (Gunnison River basin)	140	Cottonwood Wash near Marana, Ariz Courthouse Wash near Moab, Utah	189
near Crested Butte, Colo	132	Cow Creek near Ridgway, Colo	164
Cement Creek (San Juan River basin)	-00	Cow Creek near Ridgway, Colo Cow Wash near Jensen, Utah	52
near Silverton, Colo	327	Crescent Wash at Crescent Junction,	
Centennial Wash near Arlington, Ariz	56	Utah	53
Chaco River tributary at Naschitti,		Cross Creek near Minturn, Colo	97
N. Mex		Crystal Creek near Maher, Colo	146
Chemehuevi Wash near Needles, Calif	55	Crystal River, above Avalanche Creek,	100
Cherry Creek near Red Mesa, Colo	340	near Redstone, Colo	109
Chevelon Fork, below Wildcat Canyon, near Winslow, Ariz	362	at Marble, Colonear Redstone, Colo	110
near Winslow, Ariz	363		144
Chusca Wash near Mexican Springs,	000	Current Creek (Green River basin), below	
N. Mex	341	Red Ledge Hollow, near Fruitland,	
Cibecue Creek near Chrysotile, Ariz	56	Utah	264
Cibecue No. 1 tributary near Show Low,		near Fruitland, Utah	265
Ariz	56		3.55
Cibecue No. 2 tributary near Show Low,	F.C	near Cedaredge, Colo	155
Ariz	56	Dallas Creek, East Fork, near Ridgway,	
Cimarron Creek, below Squaw Creek, at Cimarron, Colo	146	Colo	162
near Cimarron, Colo	145	near Ridgway, Colo	163
Cisco Wash at Cisco, Utah	52	West Fork, near Ridgway, Colo	162
Clear Creek, below Willow Creek, near		Date Creek near Congress, Ariz	385
Winslow, Ariz	364		52
near Winslow, Ariz	365	Deep Creek near Paradox, Colo	184
Cliff Creek near Jensen, Utah	52	Deer Creek, East Fork, near Boulder,	
Climate in area	22	Utah53	,304
Clover Creek near Neola, Utah	270	Delaney Wash near Wintersburg, Ariz	56 299
Coal Creek (Green River basin) near	278	Dirty Devil River near Hite, Utah	
Meeker, Colo	210	Dirty Devil River basin, records53,298 Disappointment Creek near Dove Creek,	-300
Crested Butte, Colo	131	Colo	173
Coalpits Wash near Rockville, Utah	55	Colo Dolores River, at Bedrock, Colo	174
Cochetopa Creek near Parlin, Colo	139	at Dolores, Colo	170
Coleman Wash tributary near Woodside,		at Gateway, Colo	185
Utah	53	below Rico, Colo	170
Colorado River, at Glenwood Springs,	7.00	near Cisco, Utah	185
Colo	103	near McPhee, Colo	172
at Hite, Utah	301. 72		-100
at Hot Sulphur Springs, Colo at Lees Ferry, Ariz	349	Utah	251
at Yuma, Ariz	464	at mouth, near Dry Fork, Utah	253
below Baker Gulch, near Grand Lake,		below springs, near Dry Fork, Utah	253
Colo	58	East Fork of, near Dry Fork, Utah	252
below Shadow Mountain Reservoir,		East Fork of, near Dry Fork, Utah North Fork of, near Dry Fork,	
Colo	61	Utah Dry Gulch near Neola, Utah Duchesne River, at Duchesne, Utah	252
near Cameo, Colonear Cisco, Utah	113	Dry Guich near Neoia, Utah	274 262
	169	of Hama Hitch	259
near Dotsero Colo	103	at Hanna, Utahat Myton, Utahat Myton, Utahat Provo River Trail, near Hanna,	269
near Fruita. Colo	169	at Provo River Trail, near Hanna.	
near Granby, Colo	63	Utah	255
near Dotsero, Colo	370	Utahnear Hanna, Utah	257
near Grand Lake, Colo	58	near Randlett, Utahnear Tabiona, Utah	274
near Kremmling, Colo near Palisade, Colo	91	near Tabiona, Utah	259
near Palisade, Colo	128	West Fork, below Dry Hollow, near Hanna, Utah	0.5.5
near Topock, Ariz	384	Hanna, Utan	257 258
61 62 79 01 102 110 199	2 160	Duck Check (Gila River basin) et Cliff	200
186,301,349,370,384,464	, ±00,	Hanna, Utah near Hanna, Utah Duck Creek (Gila River basin), at Cliff, N. Mex	55
Colt Canyon at Pleasanton, N. Mex	55	N. Mextributary at Cliff, N. MexDuck Creek (Las Vegas Wash basin) at	55
Columbine Creek above Lake Granby		Duck Creek (Las Vegas Wash basin) at	
near Grand Lake, Colo		wnitney, Nev	55
	61		
Coon Creek near Mesa, Colo		Durham Wash near Oracle Junction,	
near Grand Lake, Colo	127	Durham Wash near Oracle Junction, Ariz	55
N. Mex		Aris	55
N. Mex Copper Hill Wash (Copper Gulch) at	127 55	Aris Eagle Creek, above pumping plant, near	
N. Mex	127	Ariz Eagle Creek, above pumping plant, near Morenci Ariz	55 403
N. Mex. Copper Hill Wash (Copper Gulch) at Globe, Ariz. Corduroy Creek, above Forestdale Creek near Show Low. Ariz.	127 55	Aric Eagle Creek, above pumping plant, near Morenci. Ariz near Double Circle Ranch, near	
N. Mex. Copper Hill Wash (Copper Gulch) at Globe, Ariz. Corduroy Creek, above Forestdale Creek near Show Low. Ariz.	127 55 56	Aric Eagle Creek, above pumping plant, near Morenci. Ariz near Double Circle Hanch, near Morenci. Ariz	403
N. Mex. Copper Hill Wash (Copper Gulch) at Globe, Ariz Corduroy Creek, above Forestdale	127 55 56 446	Aric. Eagle Creek, above pumping plant, near Morenci. Ariz. near Double Circle Hanch, near Morenci. Ariz. Eagle River, at Eagle, Colo	403 402

P 2 P 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	age	Oile Divers heles Oilleasts Day Auto	Page
Eagle River below Gypsum, Colo Eagle River basin, records95-		Gila River, below Gillespie Dam, Ariz near Cliff, N. Mex	461 390
East Fork, at East Fork Canal, Wyo	202	near Clifton, Ariz	394
at Newfork, Wyo	203	near Dome, Ariznear Gila, N. Mex	463 389
East Inlet near Grand Lake, Colo	60	near Laveen. Ariz	426
East Mancos River near Mancos, Colo	344	near Red Rock, N. Mex	391
East Rifle Creek near Rifle, Colo	149	near Sentinel, Ariz	56 9 -463
East River, at Almont, Colo	133	Gobernador Canyon near Gobernador,	
near Crested Butte, Colo East Verde River, near Childs, Ariz	131 56	N. Mex	5 3 283
near Payson, ArisElk Creek at New Castle, Colo	56	Gore Creek, at upper station, near	
Elk Creek at New Castle, Colo	114 230	Minturn, Colonear Minturn, Colo	98 99
Elk River, at Clark, Colo at Hinman Park, Colo	229	Grand Lake Outlet at Grand Lake, Colo	60
near Trull, Colo	231	Grand Lake Outlet basin, records	59-60
Elkhead Creek near Elkhead, Colo Escalante River, at mouth, near	232	Granite Creek near Prescott, Ariz Green River, at Flaming Gorge, near	452
Escalante, Utah	305	Linwood, Utah	225
near Escalante, Utah	303 305-	at Green River, Utahat Green River, Wyo	288 213
		at Warren Bridge, near Daniel, Wyo	193
Fall Creek (Dolores River basin) near Fall Creek, Colo	176	near Daniel, Wyo	196 208
Fall Creek (Green River basin) near	110	near Fontenélle, Wyonear Green River, Wyo	213
Pinedale, Wvo	199	near Greendale, Utah	227
Farley Canyon at Hite, Utah	53	near Jensen, Utahnear Linwood, Utah	246 220
River) tributary near Hanna,		near Ouray, Utah	281
Farm Creek (tributary to Uinta River)	52	tributary near Linwood, Utah	52 13-297
near Whiterocks, Utah	272	Greens Canal near Eloy, Ariz	56
Ferron Creek, near Castle Dale, Utah	295	Greens wash at Chulchu, Arlz	56 140
tributary near Ferron, Utah (upper station) near Ferron, Utah	295	Gunnison River, at Iola, Colobelow Gunnison tunnel, Colo	147
Figuredo Wash near Mexican Springs,		near Grand Junction, Colo	168
N. Mex Fish Creek near Milner, Colo	54 232	near Gunnison, Colo North Fork, near Paonia, Colo	135 152
Flood frequency, at a gaging station	23	near Somerset, Colo	151
composite curves	27	Gunnison River basin, records12 Gypsum Creek near Gypsum, Colo	9-168 101
curvesregional	26	dypsum ofeek hear dypsum, ooto	101
regional	23	Hades Creek near Hanna, Utah	256
Florida River, at Bondad, Colo		Halfway Hollow near Lapoint, Utah Hams Fork, at Diamondville,	52
near Hermosa, Colo	332	Wyo	219
Fontenelle Creek, near Fontenelle,	209	near Elk Creek ranger station, Wyo near Frontier, Wyo	218 218
near Herschler Ranch, near Fon-		Harley Dome Wash near Harley Dome,	210
tenelle, Wyo	208 447	Utah Hassayampa River, at Box Dam site, near	52
Fortification Creek at Craig, Colo	233	Wickenburg, Ariz	460
Fortification Creek at Craig, Colo Foster Canyon near Coolidge, N. Mex	54	near Morristown, Ariz	461
Four Mile Canyon near Coolidge, N. Mex	54	Hatch Wash near La Sal, Utah	459 191
Fourmile Creek (Green River basin)		Henrieville Creek at Henrieville, Utah.	54
near Baggs, Wyo Fourmile Creek (Roaring Fork basin)	244	Henrys Fork, at Linwood, Utah	224 222
near Carbondale, Colo	112	near Burntfork, Wyo near Lonetree, Wyo	220
Fraser River, at Granby, Colo near Winter Park, Colo	72 65	Henson Creek at Lake City, Colo Hermosa Creek near Hermosa, Colo	143
Fraser River basin, records 68	5-72	Hog Canyon near Kanab, Utah	329 54
Fry Canyon near Hite, Utah	53	Homestake Creek, at Gold Park, Colo	96
Fryingpan River at Norrie, Colo at Thomasville, Colo	106	Horse Creek, at Daniel, Wyo	97 196
North Fork, near Norrie, Colo	106	at Sherman ranger station, Wyo	194
Gaging stations, description of		near Daniel, Wyo	195 178
tabulated data	28	Horsefly Creek near Sams, Colo	105
inventoryshort-term	30 52	Huntington Creek, near Castle Dale, Utah	292
Galestena Canyon tributary near Black		near Huntington, Utah	291
Rock, N. Mex	54		
Gallegos Canyon tributary near Nageezi, N. Mex	326	Indian Creek, above Cottonwood Creek, near Monticello, Utah	192
Gates Canyon at Myton, Utah	53 53	above Harts Draw, near Monticello	
Georges Draw near Hanksville, Utah Gila River, at Calva, Ariz	412		193 191
at head of Safford Valley, near		Indian Wash at Grand Junction, Colo	52
Solomon, Arizat Kelvin, Ariz	404	Iron Creek near Crawford, Colo Ivie Creek above diversions, near	149
at New Mexico-Arizona State line,		Emery, Utah	298
near Virden, N. Mexat Safford, Ariz	393 410	Jones Hole Creek near Jensen, Utah	DAG
at Winkelman, Ariz	416		246
below Blue Creek, near Virden,	300	Kahnah Creek near Whitewater, Colo	167
N. Mexbelow Coolidge Dam, Ariz	415	Kanab Creek basin, records Kane Springs Canyon near Moab, Utah	54 52

	Page		Page
Keyser Creek near Leal, Colo	74	Meadow Valley Wash, near Caliente, Nev.	381
Keyser Creek near Leal, Colo Keystone Gulch near Dillon, Colo	81	near Panaca, Nev	381
Kirkland Creek at Yava, Ariz	55	Mean annual flood	_ 26
Kiser Creek near Cedaredge, Colo	156	Mesa Creek near Mesa, Colo	127
Kohatk Wash near Sells, Ariz	56	Middle Mancos River near Mancos, Colo	345
In Donne Chook woon In Donne Were	202	Middle Piney Creek, below South Fork,	205
La Barge Creek, near La Barge, Wyo near La Barge Meadows ranger	207	near Big Piney, Wyo	206
station, Wyo	206	near Big Piney, Wyo	235
near Viola, Wyo	207	Mill Creek near Moab, Utah	189
La Plata River, at Colorado-New		Miller Creek near Price, Utah	53
Mexico State line	340	Mineral Creek near Silverton, Colo	327
at Hesperus, Coloat La Plata, N. Mex	338	Mineral Gulch near Orderville, Utah	54
at La Plata, N. Mex	341	Minnesota Creek near Paonia, Colo	153
La Verkin Creek near Toquerville,	5.0	Minnie Maude Creek, at Nutter Ranch,	283
Utah Lake Fork (Green River basin) above	55	near Myton, Utah	282
Moon Lake, near Mountain Home,		near Myton, Utah	54
Utah	267	Moenkopi Wash, near Cameron, Ariz	368
Lake Fork (Gunnison River basin) at	- 1	near Tuba. Ariz	367
Gateview, Colo		Moody Wash near Veyo, Utah	376
at Lake City, Colo	143	Muddy Creek (tributary to Colorado	
Largo Canyon tributary near Reserve,	6.6	River) near Kremmling, Colo	78 78 - 79
N. Mex Las Vegas Wash near Henderson, Nev		Muddy Creek basin, records	70-73
Las Vegas Wash basin, records55		Virgin River) near Mount Carmel,	
Leopard Creek at Noel, Colo	176	Utah	54
Leroux Creek, near Cedaredge, Colo	153	Muddy Creek (tributary to Fremont	
near Hotchkiss, Colo	155	River), below Ivie Creek, near	
near Lazear, Colo	154	Emery, Utah	299
Lightner Creek near Durango, Colo	331	near Emery, Utah	298
Lime Creek (Roaring Fork basin), at Thomasville, Colo	108	River) at Bardine, Colo	150
at Troutville, Colo	107	Muddy River, near Glendale, Nev	382
Lime Creek (San Juan River basin) near	101	near Moapa, Nev	380
Silverton, Colo	328	near Overton, Nev	382
Lime Wash near Mexican Hat, Utah	54		
Little Brush Creek near Vernal,		Naturita Creek near Norwood, Colo	180
Utah	247	Navajo River, above Chromo, Colo at Banded Peak Ranch, near Chromo,	313
Little Colorado River, above Lyman Reservoir, near St. Johns,	1	Colo	312
Ariz	353	at Edith, Colo	314
above Zuni River, near Hunt, Ariz	354	Neilson Wash near Hanksville, Utah	53
at Grand Falls, Ariz	366	New Fork River, near Big Piney, Wyo	204
at Holbrook, Ariz	361	near Boulder, Wyo	200
at Woodruff, Ariz	369	Nogales Wash at Nogales, Ariz	56
near Cameron, Ariznear Hunt, Ariz	355	North Creek near Escalante, Utah	302
Little Colorado River basin,	000	North Inlet at Grand Lake, Colo	59
records54,353	-369	North Piney Creek near Mason, Wyo	204
Little Columbine Creek above Shadow		North Wash near Hite, Utah	300
Mountain Reservoir, at Grand		Only Great (G47) - Paris hardy \ com	
Lake, Colo	313	Oak Creek (Gila River basin) near Corn-	453
Little Navajo River at Chromo, Colo Little Sandy Creek, above Eden,	919	ville, Ariz	436
Wvo	211	Creek, Colo	228
near Elkhorn, WyoLittle Snake River, Middle Fork, near		Ohio Creek, near Baldwin, Colo	134
Little Snake River, Middle Fork, near		near Gunnison, Colo	135
Battle Creek, Colo	236	Old Woman Wash near Hanksville, Utah	58 58
near Dixon, Wyo	242	Olson Wash near Oracle Junction, Ariz Onion Creek near Moab, Utak	3.05
near Lily, Colo	245	Onion Creek near Moap, Utar	187
near Slater, Colo	236	Otter Creek above Green Mountain Reser-	89
North Fork, near Encampment, Wyo near Slater, Colo	237	voir, Colo	0.
South Fork, near Battle Creek,		Pachete Creek at Maverick, Ariz	440
Colo	237	Pacific Creek near Farson, Wyo	212
Lordsburg Draw tributaries near Separ.		Pack Creek, at M4 Ranch, near Moab,	3.00
N. Mex	57	Utah near Moab, Utah Pantano Wash near Vail, Ariz	190
below Snowslide Canyon, near	321	Pontono Wosh near Voil Ariz	190 56
Weminuche Pass, Colo	320	Parachute Creek, at Grand Valley,	00
near Bayfield, Colo	320	Colo	118
Los Robles Wash near Marana, Ariz	56	near Grand Valley, Colo	
Los Robles Wash near Marana, Ariz Lost Canyon Creek at Dolores, Colo	172	Colonear Grand Valley, ColoParia River, at Lees Ferry, Ariz	35]
		near Cannonville, Utah	351 54
McElmo Creek, near Colorado-Utah State	347	near Tropic, Utah	50-351
near Cortez, Colo	346	Pass Creek near Kremmling, Colo	79
McQueary Creek near Jones Pass,		Peterson Canyon, near Lordsburg,	
Colo	52	N. Mex	57
Mancos River, near Mancos, Colo	345	tributary near Lordsburg, N. Mex	57
near Towaoc, Colo	346	Picacho Wash at All-American Canal, near Yuma, Ariz	55
N. Mex	53	Piceance Creek at Rio Blanco, Colo	279
Maximum known floods, at gaging		Piedra River, at Bridge rarger station,	
stations	30	near Pagosa Springs, Colo	315
at miscellaneous sites	52		317 56
Meadow Creek near Tabernash, Colo	70	Pinal Creek at Globe, Ariz	J

	Page ₁		Page
Pinal Creek below Copper Hill Wash, at	١	Saleratus Wash, at Green River, Utak near Green River, Utah tributaries near Woodside, Utah	Page 289
Globe, Ariz	56	near Green River, Utah	53 53
Globe, ArizPine Creek (tributary to New Fork	- 1	tributaries near Woodside, Utah	53
River), above Fremont Lake, Wvo	197	Saliz Canyon tributary near Reserve,	
River), above Fremont Lake, Wyoat Fremont Lake Outlet, Wyo	198	N. Mex	55
at Pinedale, Wyo	198	Salt River, at Arizona Dam, Ariz	56
Pine Creek (tributory to North Creek)	-50	at Roosevelt, Ariz	56
Pine Creek (tributary to North Creek) near Escalante, Utah	302	near Chrysotile Ariz	449
Discon Discon heles Discon Teles	302	near Chrysotile, Ariznear Roosevelt, Ariz	450
Piney River, below Piney Lake, near		Cart Hoobevert, Rila	
Minturn, Colo	92	Salt Wash near Thompson, Utah	52
near State Bridge, Colo Piute Wash near Needles, Calif	92	Salt Wells Creek tributary near Rock	
Piute Wash near Needles, Calif	55	Springs, Wyo	52
Plateau Creek, at upper station, near	- 1	San Carlos River near Peridot, Ariz	414
Collbran, Colo	120	San Francisco River, at Clifton,	
near Cameo, Colo	128	Ariz	398
near Callbran Cala	121	Ariz. near Glenwood, N. Mex.	397
near Collbran, Colo	120	Can Iuan Divan at Dlaamfield N May	325
Placeau Greek Dasin, records	-150	San Juan River, at Bloomfield, N. Mex. at Farmington, N. Mex	
Pleasant Creek at Notom, Utah	53	at rarmington, N. Mex	337
Pleasant Valley Creek near Noel,	7.00	at Pagosa Springs, Colo	309
Colo	163	at Rosa, N. Mex	318
Pleasant Valley Wash tributary near	- 1	at Shiprock, N. Mex	342
Myton, Utah	53	East Fork, above Sand Creek, near	
Myton, UtahPole Creek below Little Half Moon	- 1	East Fork, above Sand Creek, near Pagosa Springs, Colo	306
Lake, near Pinedale, Wyo Price River, above Scofield Reservoir,	199	near Pagosa Springs, Colo	306
Price River, above Scofield Reservoir,		near Archuleta, N. Mex	323
near Scofield, Utah	284	near Blanco, N. Mex	324
at Woodside. Utah	287	near Archuleta, N. Mex. near Blanco, N. Mex. near Bluff, Utah	348
near Hainar IItah	285	tributary near Kirtland N Mer	53
at Woodside, Utahnear Heiner, Utahnear Helper, Utah	286	tributary near Kirtland, N. Mex tributary near Waterflow, N. Mex	53
Dueses Divers of Collins N. Mor.		West Houle obers Derma Teles mean	50
Puerco River, at Gallup, N. Mex	360	West Fork, above Borns Lake, near Pagosa Springs, Colo	200
near Adamana, Ariz	361	ragosa Springs, Colo	307
near Adamana, Ariz tributaries near Coolidge, N. Mex. tributaries near Gallup, N. Mex. tributary at Deflance, N. Mex. tributary at Wingate, N. Mex.	54	near Pagosa Springs, Colo	308
tributaries near Gallup, N. Mex	54	San Juan River basin, records53-54,306 San Juan Wash near Sells, Ariz San Miguel River, at Fall Creek, Colo	-349
tributary at Defiance, N. Mex	54	San Juan Wash near Sells, Ariz	57
tributary at Wingate, N. Mex	54	San Miguel River, at Fall Creek, Colo	175
tributary near Fort Wingate,	1	at Naturita, Coloat Uravan, Colo	181
N. Mex	359	at Urayan, Colo	182
tributary near Gamerco, N. Mex	360	near Nucla Colo	179
offication demotes, N. Mox	000	near Placerville, Colo. San Pedro River, at Charleston, Ariz at Palominas, Ariz. near Mammoth, Ariz.	177
Ougants Chook noon Obto City Colo	100	Son Dadno Pivan of Charleston Ariz	418
Quartz Creek near Ohio City, Colo	190	an redro hiver, at charleston, Ariz	417
Queen Creek, at Whitlow damsite, near		at raiominas, Ariz	417
Superior, Ariz	425	near mammoth, Ariz	422
near Florence Junction, Ariz	55	near Redington, Ariz	421
		near Redington, ArizSan Rafael River, near Castle Dale,	
Ranch Creek, above forks, near Fraser,		Utah	296
Colo	67	near Green River, Utah	297
Middle Fork, near Fraser, Colo	68	San Simon River, near Bowie, Ariz	55
near Frager Colo	69	near San Simon, Ariz	407
near Tabernash, Colo North Fork, near Fraser, Colo South Fork, near Winter Park,	70	near Solomon, Ariz	408
North Fork near Freser Colo	68	San Simon Wash basin, records	57
South Fork near Winter Park	0.5	Santa Clara Piver above Wincor Dam	٠.
Colo	60	Santa Clara River, above Winsor Dam, near Santa Clara, Utah	377
Colo	68	near banca crara, ocan	
Rattlesnake Canyon near Rimrock,		at St. George, Utahnear Central, Utah	377 375
Ariz	454	near Central, Utan	375
Red Lake basin, records	54		
Red Mountain Creek near Ironton,		Ariz	430
Colo	160	at Cortaro, Arizat Tucson, Ariz	438
Red Tank Draw near Rimrock, Ariz	454	at Tucson, Ariz	431
Rifle Creek near Rifle, Colo	116	between Casa Grande and Stanfield,	
Rillito Creek, near Tucson, Ariz	437	Ariz	56
Rillito Creek, near Tucson, Ariz near Wrightstown, Ariz	436	near Laveen, Ariz	440
Rincon Creek near Tucson, Ariz	436	near Lochiel, Ariz	427
Rio Blanco near Pagosa Springs, Colo	310	near Nogales, Ariz	427
Rito Blanco near Pagosa Springs,		tributaries near Tucson, Ariz	56
	311	tributary at Continental, Ariz	56
Colo Roan Creek near De Beque, Colo	119	tributary near Amada, Ariz	55
noan order near be beque, colo	TT3	tributary near Continental, Ariz	55
Roaring Fork, at Aspen, Colo	104		
	104	offication of the state of the	56
at Glenwood Springs, Colo	112	tributary near Cortoro, Ariz	
Roaring Fork basin, records104	112 1-113	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz	385
Roaring Fork basin, records	112 1-113	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz Santa Rosa Wash, near Vaiva Vo, near	
Roaring Fork basin, records	112 1-113	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz	439
Roaring Fork basin, records	112 1-113	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz	
Roaring Fork basin, records	112 1-113 184	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz near Sells, Ariz Sapillo Creek near Pinos Altos,	439 56
Roaring Fork basin, records	112 1-113 184	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz near Sells, Ariz Sapillo Creek near Pinos Altos,	439
Roaring Fork basin, records	112 1-113 184 86	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz near Sells, Ariz Sapillo Creek near Pinos Altos, N. Mex	439 56
Roaring Fork basin, records	112 1-113 184 86 93	tributary near Cortoro, Ariz	439 56
Roaring Fork basin, records	112 1-113 184 86 93 261	tributary near Cortoro, Ariz Santa Maria River near Alamo, Ariz Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz Sapillo Creek near Pinos Altos, N. Mex Sapinero Creek at Sapinero, Colo Savery Creek, at upper station, near	439 56 55 142
Roaring Fork basin, records	112 1-113 184 86 93 261 261	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo.	439 56 55 142 241
Roaring Fork basin, records	112 1-113 184 86 93 261	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo.	439 56 55 142 241 241
Roaring Fork basin, records	112 4-113 184 86 93 261 261 260	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. sells Wash, at Sells, Ariz.	439 56 55 142 241 241 57
Roaring Fork basin, records	112 1-113 184 86 93 261 261	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. Sells Wash, at Sells, Ariz. tributary at Sells, Ariz.	439 56 55 142 241 241 57
Roaring Fork basin, records	112 4-113 184 86 93 261 261 260 445	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. Sells Wash, at Sells, Ariz. tributary at Sells, Ariz. Sheep Creek near Manila, Utah.	439 56 55 142 241 241 57 57 225
Roaring Fork basin, records	112 4-113 184 86 93 261 261 260 445	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. Sells Wash, at Sells, Ariz. tributary at Sells, Ariz. Sheep Creek near Manila, Utah.	439 56 55 142 241 241 57 57 225 52
Roaring Fork basin, records	112 4-113 184 86 93 261 261 260 445	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, neer Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, neer Savery, Wyo. near Savery, Wyo. Sells Wash, at Sells, Ariz. tributary at Sells, Ariz. Sheep Creek near Manila, Utah. Short-term gaging stations. Show Low Creek at Show Low Ariz.	439 56 55 142 241 57 57 225 356
Roaring Fork basin, records	112 1-113 184 86 93 261 261 260 445 166	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. sells Wash, at Sells, Ariz. tributary at Sells, Ariz. Show Low Creek at Show Low, Ariz. Show Low Creek at Show Low, Ariz. Show Low Creek at Show Low, Ariz. Sids Draw near Castle Dale, Utah.	439 56 55 142 241 241 57 57 225 52
Roaring Fork basin, records	112 1-113 184 86 93 261 261 260 445 166	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. Sells Wash, at Sells, Ariz. Tributary at Sells, Ariz. Sheep Creek near Manila, Utah. Short-term gaging stations. Show Low Creek at Show Low, Ariz. Sids Draw near Castle Dale, Utah. Silver Creek (tributary to Fast Fork)	439 56 55 142 241 57 57 225 356 53
Roaring Fork basin, records	112 1-113 184 86 93 261 261 260 445 166	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. Sells Wash, at Sells, Ariz. Tributary at Sells, Ariz. Sheep Creek near Manila, Utah. Short-term gaging stations. Show Low Creek at Show Low, Ariz. Sids Draw near Castle Dale, Utah. Silver Creek (tributary to Fast Fork)	439 56 55 142 241 57 57 225 356
Roaring Fork basin, records	112 1-113 184 86 93 261 261 260 445 166	tributary near Cortoro, Ariz. Santa Maria River near Alamo, Ariz. Santa Rosa Wash, near Vaiva Vo, near Sells, Ariz. near Sells, Ariz. Sapillo Creek near Pinos Altos, N. Mex. Sapinero Creek at Sapinero, Colo. Savery Creek, at upper station, near Savery, Wyo. near Savery, Wyo. sells Wash, at Sells, Ariz. tributary at Sells, Ariz. Sheep Creek near Manila, Utah Show Low Creek at Show Low, Ariz. Sids Draw hear Castle Dale, Utah. Silver Creek (tributary to East Fork)	439 56 55 142 241 57 57 225 356 53

	Page		Page
Slate Creek near Dillon, Colo	87	Uncompangre River, at Fort Crawford,	2.25
Slate River near Crested Butte, Colo	132	Colo	165
Slater Fork, at Baxter Ranch, near		at Montrose, Colo	165
Slater, Colo	239	at Ouray, Colobelow Ouray, Colo	160
near Slater, Colo	240	below Ouray, Colo	161
Smith Canyon near Coolidge, N. Mex	54	Upper Valley Creek near Escalante,	
Smith Fork (tributary to Blacks Fork),	03.5	Utah	53
at Mountainview, Wyo	217		
East Fork of, near Robertson, Wyo West Fork of, near Robertson, Wyo	215	Valdez Draw near Bloomfield, N. Mex	325
west fork of, near Robertson, wyo	216	Vaqueros Canyon near Gobernador,	010
Smith Fork (tributary to Gunnison River), at Crawford, Colo	3.46	N. Mex	319
River), at Crawford, Colo	148	Vasquez Creek near Winter Park, Colo	66
near Crawford, Colo	148	Verde River, below East Verde River,	150
Snake River, at Dillon, Colo	82	near Pine, Ariz	456
near Montezuma, Colo	81	below Tangle Creek, above Horseshoe	450
Soap Creek near Sapinero, Colo	141	Dam, Ariz	456
Sonoita Creek near Patagonia, Ariz	429	near Camp Verde, Ariznear Clarkdale, Ariz	455
Spring Canyon Wash at Glendale,	- 4	near Clarkdale, Ariz	56
Utah	54	Virgin River, at Littlefield, Ariz	379
Spring Creek at La Boca, Colo	322	at Virgin, Utah	374
Steelman Creek near Jones Pass,		East Fork near Orderville, Utah	54
Colo	52	near Mount Carmel, Utah	54
Steins Creek tributary near Steins,		near St. George, Utah	378
N. Mex.	55	North Fork, near Springdale, Utah	373
Straight Creek near Dillon, Colo	85	Virgin River basin, records54-55,37	0-000
Strawberry Creek near Granby, Colo	71	Wante Co Doors was Making Hitch	ΓĐ
Strawberry River, at Duchesne, Utah		Wagstaff Draw near Tabiona, Utah	52
near Soldier Springs Utah	263	Ward Creek, below Kiser Creek, near	157
tributary near Duchesne, Utah	53	Cedaredge, Colonear Cedaredge, Colo	156
Suffering Wash near Oracle Junction,	55	Wash above Gunters Ranch, near	100
ArizSulphur Creek at Fruita, Utah	55 53	Pomerene, Aris	55
Sunnyside Creek near Burns, Colo	94	Wash at All-American Canal, near Yuma,	- 00
Surface Creek, at Cedaredge, Colo	158	Ariz	55
of Felent Colo	159	Water Hollow near Fruitland, Utah	265
at Eckert, Colonear Cedaredge, Colo	158		200
Succemone Cheek near McDowell Anis	56	station, near Pagosa Springs,	
Sycamore Creek near McDowell, Ariz	30	Colo	316
Tabeguache Creek near Nucla, Colo	182	West Divide Creek below Willow Creek,	010
Taylor Creek near Gateway, Colo	183	near Raven, Colo	115
Taylor River, at Almont, Colo	130	West Mancos River near Mancos, Colo	344
at Taylor Park, Colo	129	West Muddy Creek near Ragged Mountain,	0
below Taylor Park Reservoir, Colo	129	Colo	150
Tenmile Creek, at Dillon, Colo		West Paradox Creek, near Bedrock,	
at Frisco, Colo	83	Colo	175
below North Fork, at Frisco, Colo	83	near Paradox, Colo	174
Thompson Creek near Carbondale,		West Turkey Creek near Light, Ariz	57
Colo	111	White Canyon near Hite, Utsh	301
Tomichi Creek, at Gunnison, Colo		White Canyon basin, records5	
at Parlin, Colo		White River (tributary to Flack River),	
at Sargents, Colo	136	East Fork, near Fort Apache,	
near Doyleville, Colo	137	Ariz	444
Tongue Creek near Cedaredge, Colo	155	near Fort Apache, Ariz	445
Tonto Creek above Gun Creek, near		North Fork, near McNary, Ariz White River (tributary to Green River)	443
Roosevelt, Ariz	451	White River (tributary to Green River)	
Trail Hollow near Tabiona, Utah	53	at Buford, Colo	276
Troublesome Creek, at Atmore Ranch,		below Trapper's Lake, Colo	275
near Troublesome, Colo	76	near Buford, Colo	275
East Fork, near Troublesome, Colo	77	near Meeker, Colo	278
near Pearmont, Colo	76	near Meeker, Colonear Watson, Utah	280
near Troublesome, Colo	77	South Fork, at Buford, Uclo	277
Troublesome Creek basin, records	76-77	near Buford, Colo	276
Trout Creek (Gila River basin), near	6.6	White River (tributary to Frice River)	0.05
Luna, N. Mex	395	near Soldier Summit, Utah	285
near New Mexico-Arizona State line,	005	North Fork, near Soldier Summit,	904
near Luna, N. Mex	395	Utah	284
Trout Creek (Green River basin) near	0.03	Whiterocks River, above Paradise Creek,	070
Phippsburg, Colo	231	near Whiterocks, Utah	272
Truxton Canyon near Kingman, Ariz	54	near Whiterocks, Utah	273
Tucson Arroyo at Vine Avenue, Tucson,	400	Whitewater Draw near Douglas,	165
Ariz Mulanasa Riyan naan Aragan N. Max	433	Wilson Plays basin meands	465 57
Tularosa River, near Aragon, N. Mex	396	Wilcox Playa basin, records	01
near Reserve, N. Mex	230	Williams Creek, near Bridge ranger	
Turkey Creek (Eagle River basin) at	96	station, near Pagosa Springs, Colo	316
Turkey Creek (Gila River basin) near	30	Williams Fork (tributary to Colorado	0.10
Fort Apache Ariz	442	River), below Steelman Creek,	
Fort Apache, Ariz	170	Colo	73
near Pagosa Springs Colo	309	Colo near Leal, Colo	74
near Pagosa Springs, Colo Twelvemile Wash tributary near Maeser,	555	l near Parshall ('Olo	52 75
Utah		near Schull, Colo	75
	52		
Twomile Creek near La Sal. Utah	52 173	South Fork, near Parshall, Colo	52
Twomile Creek near La Sal, Utah	52 173	South Fork, near Parshall, Colo Williams Fork basin, records52.	52 73 - 75,
Twomile Creek near La Sal, Utah	173	near Scholl, Colo	
Twomile Creek near La Sal, Utah		Williams Fork (tributary to Yampa River), at Hamilton, Colo	52 73-75, 234
Twomile Creek near La Sal, Utah Uinta River, above Clover Creek, near Neola, Utah	173	Williams Fork (tributary to Yampa River), at Hamilton, Colo	234
Twomile Creek near La Sal, Utah Uinta River, above Clover Creek, near Neola, Utah	173 270	Williams Fork (tributary to Yampa River), at Hamilton, Colo East Fork of, above Willow Creek, Colo	

Willow Creek (tributary to Blue River) near Dillon, Colo		Page		Page
Willow Creek (tributary to Colorado River) above Willow Creek Res- ervoir, Colo	Willow Creek (tributary to Blue		Willow Creek (tributary to Granite	_
Willow Creek (tributary to Colorado River), above Willow Creek Res- near Granby, Colo	River) near Dillon, Colo	85	Creek) near Prescott, Ariz	
ervoir, Colo	Willow Creek (tributary to Colorado		Winters Wash, near Tonopah, Ariz	
near Granby, Colo	River), above Willow Creek Res-			56
Willow Creek (tributary to Eagle Creek) near Double Circle Ranch, near Morenci, Ariz	ervoir, Colo	64		
Willow Creek (tributary to Eagle Creek) near Double Circle Ranch, near Morenci, Ariz	near Granby, Colo	64	Hanna, Utah	258
Ranch, near Morenci, Ariz	Willow Creek (tributary to Eagle		Wood Canyon tributary near Lordsburg,	
near Point of Pines, near Morenci, Ariz	Creek) near Double Circle			57
Ariz. 400 near Maybell, Colo. 235 Millow Creek (tributary to Green River), above diversions, near Ouray, Utah. 281 near Ouray, Utah. 282 near Ouray, Utah. 282 willow Creek (tributary to Little Shake River), near Baggs, Wyo. 243	Ranch, near Morenci, Ariz	401		
Willow Creek (tributary to Green River), above diversions, near Ouray, Utah. near Ouray, Utah. 282 near Altonah, Utah. 282 near Altonah, Utah. 283 near Altonah, Utah. 284 voungs Creek near Cedaredge, Colo. 297 vellowstone Creek, below Swift Creek, near Altonah, Utah. 288 voungs Creek near Cedaredge, Colo. 297 vellowstone Creek, Colo. 297 vellowstone Creek, Colo. 298 vellowstone Creek, Colo. 298 vellowstone Creek, Colo. 299 vellowstone Creek, Delow Swift Creek, near Altonah, Utah. 268 voungs Creek near Cedaredge, Colo. 297	near Point of Pines, near Morenci,			
River), above diversions, near Ouray, Utah		400		235
Ouray, Utah	Willow Creek (tributary to Green			227
near Ouray, Utah. 282 near Altonah, Utah. 283 Willow Creek (tributary to Little Youngs Creek near Cedaredge, Colo. 157 Shake River), near Baggs, Wyo 243	River), above diversions, near			
Willow Creek (tributary to Little Youngs Creek néar Cedaredge, Colo 157 Snake River), near Baggs, Wyo 243	Ouray, Utah			
Snake River), near Baggs, Wyo 243		282		
				157
near Dixon, Wyo				
	near Dixon, Wyo	244	Zuni River at mouth, near Hunt, Ariz	354